THE UNIVERSITY OF ALBERTA

MONEY MANAGEMENT UNDERSTANDINGS OF TENTH GRADE STUDENTS

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Money Management Understandings of Tenth Grade Students", submitted by Melvin Rudolph Bakken in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

Junior and senior high school students are spending more money and making more financial and shopping decisions than ever before. Increased purchasing power in the hands of young, inexperienced buyers may result in serious economic problems such as: (1) poor money management, (2) acquisition of excessive debt, (3) payment of high interest rates, and (4) exploitation through unethical business practices. The decisions students make influence supply and demand, and thus help determine what is manufactured and sold. The total expenditure of students in United States has grown from six billion dollars in 1959 to 11 billion in 1963 and is expected to reach 21 billion dollars by 1970.

The purposes of this study are to investigate the effects of intelligence, socio-economic level, sex, and a course in Business Fundamentals on students' scores on a test of money management understandings. For testing purposes, the investigator used a sixty-item test of money management understandings, covering the areas of Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance.

The population of the study consisted of the Grade X students enrolled in Viscount Bennett High School, Calgary, Alberta, in June, 1964.

Calculation of the effects of the different variables was by Multiple Linear Regression, using the University of Alberta I. B. M. Computer.

The general findings show that students' knowledge of money management understandings is positively related to intelligence, and that students with a course in Business Fundamentals have a better understanding of money management than those who have not taken the course. Male students do better than female students on the topic, "Borrowing Money and Using Credit." Socio-economic level also affects students' scores, with students in higher levels scoring higher than the others. This was particularly noted on the topic of Insurance, but was not so significant in the areas of Borrowing Money and Using Credit, and Personal Finance and Budgets.

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CHAPTER I

INTRODUCTION

The purpose of this study is to examine the money-management understandings of High School students. Preliminary to an examination of money-management understandings, it may be helpful to consider the amounts of money spent by young people today.

Recent reports indicate that youth are handling increasing amounts of money each year. A U. S. survey reported that in the fifteen-year period, from 1947 to 1963, the pocket money of junior and senior high school students had increased from $2.50 to $10.00 weekly.[1]

McMurtry reports that the average expenditure of high school students in the year 1959 was $375. He states:

> . . . the youth market is rapidly attracting attention as sixteen million junior and senior secondary school boys and girls control six billion dollars of annual spendable income of their own. At this stage of development, economics and business impinge more and more upon his life. His understandings of the business and economic world need to be broadened to encompass the expanding world of this generation of youth.[2]

Four years later (1963) the total expenditure of students had reached 11 billion dollars, as shown in a survey by Paolucci and Thal:

> One marketing estimate shows the pocket money of junior high and senior high school students has increased about 300 per cent since 1945. There are industries whose very existence depends upon

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[1]"Teenage Dollars Need Direction," Teaching Topics, Institute of Life Insurance and Health Insurance Institute, New York, Volume 14, No. 1, Fall 1964, p. 4.

[2]David C. McMurtry, "Business-Economic Education in the Secondary School," The Balance Sheet, South-Western Publishing Co., Cincinnati, Ohio, October, 1964, p. 56.

> both the American teenager's taste and his dollar. In 1963, 22½ million teens in the United States--about 12 percent of the population--spent 11 billion dollars of their own money on goods and services designed to satisfy their special needs and whims. By 1970, it is estimated, they will be relieving their purses and pockets of some 21 billion dollars.
>
> Just for perspective--11 billion dollars will buy more than 2,000 jet airliners. This figure, also, surmounts the total book budgets of all the libraries in the United States and Canada for the next 111 years.[3]

Recognized factors contributing to this increase in teenage spending are improved economic conditions, higher allowances from parents, part-time employment of many students, and the availability of teenage charge accounts.

As reported in the Canada Year Book, personal income of Canadians has increased from 26 million dollars in 1959 to 33 million dollars in 1963.[4] The average weekly earnings of wage earners has increased approximately 40 per cent during the ten-year period, 1954-1963.[5]

Higher personal incomes make it possible for parents to provide their children with increased allowances. Studies indicate that from one-half to two-thirds of teenagers money comes from allowances. Cateora reports:

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[3]Paolucci, Beatrice, and Thal, Helen. Youth and Money, Washington National Education Association, Department of Home Economics, Washington, D.C., 1964, pp. 7-8.

[4]Canada Year Book, Dominion Bureau of Statistics, Ottawa, 1965, p. 1011.

[5]Ibid., p. 732.

> Basically, the family with one or more teenagers to feed, clothe, educate, and entertain, must switch spending away from what adult members may want to the needs and demands of the younger members of the family.[6]

Paolucci and Thal state that about half of the teenager's money comes from allowances. They interpret "allowance" as stated in the following passage:

> It may mean that nothing is involved other than being a family member. It may represent one's share in the family income in return for sharing in the household work . . . it may stand for a sum sufficient in size to cover regular school expenses, clothing, recreation, transportation, gifts and contributions.[7]

Availability of part-time employment provides a source of income for many students. A poll of 12,000 teenagers in one of the American States revealed that from 30 to 55 per cent of the boys and from 15 to 30 per cent of the girls earned money in jobs outside the home.[8] An informal survey in Grades X, XI and XII of an Edmonton High School revealed that 40 percent (74 out of 183) of the students held part-time jobs and earned money on their own.

The general extension of credit to teenagers has also greatly increased their purchasing power. "Teaching Topics" reports that charge accounts to teenagers have doubled since 1959. Forty per cent of Grade XII boys had charge accounts as did twenty per cent of Grade XII girls.[9]

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[6]Philip R. Cateora, "How Do Teens Spend Their Money?" Teaching Topics, op. cit., p. 6.

[7]Paolucci and Thal, op. cit., p. 14.

[8]Teaching Topics, op. cit., p. 6.

[9]Ibid., p. 7.

In Canada, too, charge accounts are available to a large number of high school students. In response to a request for information concerning teenage credit in Alberta, three of the large department stores in Edmonton reported a steady growth in teenage charge accounts. Although each application for credit is considered on its own merits, a few general principles apply. Necessary conditions for the establishment of a teenage charge account are:

1. Approval of parent.
2. Steady income, from either employment or allowance.
3. Acceptance of credit terms, which include a reasonable limit, and repayment and further purchases on the revolving account principle.

The stores surveyed indicated general satisfaction with these accounts and stressed that, in their opinion, the young people were learning good buying habits.

A similar opinion is reported in a U. S. credit survey in 1963 which states:

> Experience shows that these young people take their credit responsibilities seriously. The money-management experience which they acquire through teenage accounts trains them ultimately to become wise, sound, and reliable customers.[10]

It is not only the teenager, but also the younger child who is becoming more and more of a power in decision making in today's purchases. Satlow, writing in Consumer Education, reports:

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[10] How to Use Credit Wisely, International Consumer Credit Association, St. Louis, Missouri, 1963, p. 32.

> Current market studies have disclosed that younger children in the 10 - 14 age group are making their own decisions about colors and styles.[11]

Both teenagers and younger children are allowed much freedom in making their purchases. Edmonton stores report that students generally buy their own clothes, sports equipment, or other merchandise without the presence of a parent.

Parents, teachers, and others charged with the responsibility of educating youth must be concerned with this increase in teenage spending. This concern is expressed by several writers. Price states:

> We live in a nation where a living is no longer something people make. It is something they buy. And how well they live depends not just on the size of their incomes but also upon how intelligently they spend them. Moreover, by their choices in the market place, consumers help to determine how the valuable productive resources of our community are used.[12]

McMurtry reports that economic education should not be deferred until the need becomes urgent at the adult level:

> This new economic education is more than the abolition of economic illiteracy--it is a behaviour problem; it is concerned with what the consumer-citizen will do in the market place and at the ballot box.[13]

Concern is also felt over the increase in credit buying, the number of repossessions, the high interest rates, and certain unethical business practices. The Alberta Minister of Public Welfare, The Hon. L. C. Halmrast, is quoted as saying:

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[11] I. David Satlow, "Consumer Education," Business Education World, New York, December, 1964, p. 32.

[12] Ray G. Price, "Educational Horizons in Business Education in the 1970's," Alberta Business Education Synoptic, June 1964, p. 4.

[13] David C. McMurtry, op. cit., p. 57.

> The public needs more counselling about the perils of credit buying. Young married couples are most prone to the pitfalls. We will see many, many young husbands deserting intolerable situations. Much more counselling will have to be done to aid these young people in maintaining their independence.[14]

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[14]Hon. L. C. Halmrast, The Edmonton Journal, Nov. 25, 1965.

Footnote on Consumer Education--

In September, 1964, after the data for this study were collected, a new unit, "Consumer Education" was added to the Social Studies 10 course in Alberta High Schools. It is compulsory for all Grade X students, and is planned to take 6 - 8 weeks. It covers the following topics:

> Credit used by Consumers, Savings, Measuring and Using Credit with Wisdom, Making a Budget, Legal Problems for Consumers, Becoming More Intelligent Consumers through Wise Selection, Advertising, and Consumer Aids.[15]

Brown, the author of "Consumer Education" states:

> When one considers that all people are consumers, that they are constantly purchasing articles for their own use and enjoyment, and that these purchases represent billions of dollars yearly, it becomes increasingly evident that they must purchase goods intelligently--according to their needs and within their means . . . Credit has also become an integral part of our economy . . . An attempt is also being made in this study to warn the consumer against the pitfalls of credit buying. It is hoped thereby that the reader will become a more intelligent consumer.[16]

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[15]Department of Education, Government of the Province of Alberta, Program of Studies for Senior High Schools of Alberta, 1964, p. 15.

[16]N. E. Brown, "Consumer Education," (Toronto, The Macmillan Company of Canada Limited, 1964), p. 2.

Population figures at present show that about one-half of Canada's population is under the age of 25, and the percentage at lower levels is increasing. A high birthrate together with a low death rate among children added nearly 2,000,000 to the number of persons under 15 years of age between 1951 and 1961, an increase of 46%.[17]

The trend toward increased income, expenditure, and decision making on the part of young people makes a study of their money-management understandings appropriate and timely.

STATEMENT OF THE PROBLEM

This study is designed to seek answers to the following questions:

Do the factors of intelligence, socio-economic level, and sex affect the money-management understandings of high school students?

Does the course, Business Fundamentals 10 contribute significantly to the money-management understandings of high school students?

HYPOTHESES

The following hypotheses were designed to test the money-management understandings of the students included in the study:

1. There is no significant difference in the measured money-management understandings of male and female students.
2. There is no significant difference in the measured money-management

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[17] Canada 1963, Dominion Bureau of Statistics, Ottawa, 1963, p. 10.

understandings of students of high, average and low socio-economic levels.

3. There is no significant difference in the measured money-management understandings of high, average, and low intelligence levels.
4. There is no interaction on the students' scores of measured money-management understandings (1) between sexes and socio-economic level, (2) between sexes and ability levels; (3) between socio-economic levels and ability levels, (4) among sexes, socio-economic levels and ability levels.
5. There is no significant difference in the measured money-management understandings between the students who have taken the course, Business Fundamentals 10, and those who have not, when adjustment is made for intelligence and socio-economic level.
6. There is no significant difference among students by sex, intelligence, or socio-economic levels in their achievement on the items pertaining to borrowing money and using credit.
7. There is no significant difference among students by sex, intelligence, or socio-economic levels in their achievement on the items pertaining to personal finance and budgets.
8. There is no significant difference among students by sex, intelligence, or socio-economic level in their achievement on the items pertaining to insurance.

DELIMITATIONS

While there are many factors which might affect a student's knowledge of money management understandings, only the effects of sex, intelligence, socio-economic level, and a course in Business Fundamentals 10 are included in this study. It does not consider the effect of other High School courses, ages of students, teacher qualifications, or out-of-school work experience.

The study is also limited in that there is no assurance that all the topics included in the test were actually studied during the year in the Business Fundamentals course.

The fact that the test is a verbal one could well affect the scores, giving an advantage to the students in the higher scholastic ability groups.

DEFINITION OF TERMS

Money-management understandings. A knowledge of basic finance facts and principles on (a) Borrowing Money and Using Credit, (b) Budgets and Personal Finance, and (c) Insurance.

Socio-Economic Level. The ranking of individuals in social levels, based on occupation and education of parents.

Business Fundamentals Course. A High School elective, "Business Fundamentals 10" offered in 1964 for 2, 3, or 4 credits to students in Alberta High Schools. The students included in this study were taking the course for three credits.

CHAPTER II

REVIEW OF LITERATURE

This chapter will review the findings of a number of studies investigating the general business, economic, and money-management understandings of High School students.

Since Jelley's[1] dissertation forms the basis of the test used in the present study, a short review of its aims and purposes is included.

Many of the problems which prompted Jelley to prepare his Money-Management Test and to survey the money-management understandings of High School students in 1958 are even more pressing today. Jelley stressed that people must now buy their living--they make or grow only a small part of their needs, and money is exchanged for practically all their wants.

Jelley justified his study upon Price's[2] publication which expressed the need for more research and instruction in Consumer Education. Both Price and Jelley concluded that Consumer Education was necessary and that it was the responsibility of the school to provide it. The complexity of today's business, the high pressure of advertising, the

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[1]Herbert M. Jelley, A Measurement and Interpretation of Money Management Understandings of Twelfth-Grade Students, Doctoral Dissertation, University of Cincinnati, 1958.

[2]Ray G. Price, A Summary of Research in Consumer Education, D. Appleton-Century Co., New York, 1943.

trend toward time payments, and exorbitant interest rates, all indicate a need for a well-informed consumer population.

The purpose of Jelley's study was to determine the money-management understandings of twelfth-grade students. The four major sections of his study were:

1. To isolate the topics dealing with money management which are of greatest importance.

2. To determine the extent of twelfth-grade students' understandings of these money management topics.

3. To determine whether differences in mastery are associated with differences in socio-economic status, academic achievement, and sex.

4. To suggest how the evidence gathered can be used for curricular planning.[3]

Jelley's findings relating to the effects of socio-economic status, academic achievement, and sex on money management understandings will be found under their respective headings in this chapter. His test on Money Management Understandings will be described in Chapter III.

EFFECTS OF SPECIFIC HIGH SCHOOL COURSES ON THE ECONOMIC UNDERSTANDINGS OF HIGH SCHOOL STUDENTS

A number of studies have attempted to discover the effects of courses in General Business or Economics on the economic understandings of high school students.

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[3]Delta Pi Epsilon Journal, Volume III, No. 1, Nov. 1960, p. 2.

Clark[4] investigated and compared the economic understandings of students who had taken a course in General Business with those who had not. The problem was to determine whether students who had taken the general business course had a better understanding of economic principles than those who had not taken the course. Five levels of ability were determined by scores on a mental ability test, and the gains in each were investigated. The Alft Standard Achievement Test of Economic Understandings which was designed to measure economic achievement at the twelfth grade level was used to test 547 Grade X students in Minneapolis High Schools. One hundred and twenty-five of these students had taken the General Business Course.

Clark[5] found that the general business students in the average and above average groups (100 - 85 percentile), (84 - 65 percentile), and (64 - 45 percentile) scored significantly higher than the non-general business students. In the below average groups (44 to 25 percentile) and (24 to 0 percentile) there was no significant difference in the scores of the general business students and the non-general business students. Clark recommended that the course in general business should be adapted to meet the needs and abilities of all. The general business course should make use of content and methods which challenge the high ability students as well as the average and low ability students.

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[4]Marvin A. Clark, "Economic Understandings of Tenth Grade Students," (unpublished Master's Thesis, University of Minnesota, Minneapolis, 1962).

[5]Ibid., pp. 54-55.

Ousdigian[6] used the same test, Standard Achievement Test of Economic Understandings, to measure economic understandings of Grade IX students in the Minneapolis area. His purpose was to measure the economic understandings of students before and after a general business course, and to compare the scores of these students with scores of students of similar ability and socio-economic level who had not taken the course. Ousdigian found that all ability groups gained significantly from the general business course, with the above average and average ability groups making the greatest gains. Ousdigian concluded that the course was justified, but felt that it should be modified to suit the lower ability students. Ousdigian used the Standard Test of Economic Understandings for testing Grade IX students, whereas the test had been devised for the twelfth-grade level. This may account, in part, for the difficulty the lower ability students had with the test.

Campbell's[7] study was designed to investigate the effect of a course in high school economics on the economic understandings of senior high school students. His hypothesis stated, "There is no significant difference between the measured economic understandings of students with a course in economics and those without a course, when adjustment is made for ability and socio-economic background."[8] Campbell

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[6]Theodore O. Ousdigian, "Economic Understandings of Ninth Grade Students" (unpublished Master's Thesis, University of Minnesota, Minneapolis, 1962.

[7]Morris W. Campbell. "Economic Understandings of Grade XII Students," (unpublished Master's Thesis, University of Alberta, Edmonton, 1964.)

[8]Ibid., p. 11.

used a Canadian Revision of the Test of Economic Understanding developed by the Joint Council on Economic Education for testing twelfth-grade students in Regina, Saskatchewan, in May, 1964. Campbell's study indicated that,with the scores adjusted for differences in ability and socio-economic level, there was a significant difference (.01 level) between the students who had taken the course in economics and those who had not. He concluded therefore that there was a need for teaching Economics at the high school level.

Sheldon,[9] using his own test, attempted to discover the extent to which high school students possessed selected business understandings, skills and abilities, and to evaluate the effectiveness of a general business course for imparting such knowledge. Sheldon found that the above average students who had taken the general business course scored significantly higher than the above average ability students who had not taken the course. No significant difference in scores was found for the average and below average classifications of students. In his recommendations, Sheldon questioned the effectiveness of directing mainly the low-ability students to the general business course. He also stated that the portion of general business students who took the general business course in the tenth, eleventh or twelfth grade scored higher than those who took the course in the ninth grade.

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[9]Robert J. Sheldon, "Measurement of Business Understandings, Skills, and Abilities Possessed by High School Students in the San Francisco Bay Area," (unpublished Master's Thesis, San Francisco State College, San Francisco, 1959.)

Clark[10] and Ousdigian[11] recommended a special type of course which would be most helpful to the low ability students. All the investigators agreed that the higher ability students received the most benefit from the courses. In his study, Jelley[12] did not consider the effect of a course in economics or general business, but he indicated in his recommendations that such a study should be undertaken.

EFFECT OF MENTAL ABILITY ON ECONOMIC UNDERSTANDINGS OF HIGH SCHOOL STUDENTS

Several of the previously mentioned studies compared the economic and money-management understandings at the various ability levels, using I. Q. or academic achievement scores from school records as predictors.

The students in Jelley's[13] study were divided into three groups according to scholastic grades received during their last three years in high school. These three groups were designated as higher, middle, and lower levels. On all sections of the test the students of higher academic achievement scored significantly higher than students of the middle group. Likewise, the middle achievement group scored significantly higher than the lower group. All of these comparisons revealed differences at the .01 level of confidence.

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[10]Clark, op. cit., p. 57.

[11]Ousdigian, op. cit., p. 62.

[12]Jelley, op. cit., Chapter VII.

[13]Jelley, Delta Pi Epsilon, op. cit., p. 7.

Clark[14] divided the students into five ability groups, based on scores obtained on a mental ability test. The mean scores of the five ability groups on the 65-item test are arranged in order from the highest to the lowest:

39.68	36.90	32.54	29.39	27.71

Analysis of variance indicated that there was a significant difference (.05 level) between the mean scores of all ability groups. Clark concluded that students of higher mental ability score significantly higher than students of lower ability.

Campbell[15] classified over seven hundred Grade XII students by I. Q. scores into three categories, high, average, and low. The mean scores of a 50-item test for the three groups were, respectively, 27.54, 23.44, and 19.97. These differences in mean scores were found to be significant at the .05 level. Campbell concluded that intelligence has a positive effect on the scores on the test of Economic Understandings.

EFFECT OF SOCIO-ECONOMIC STATUS ON ECONOMIC UNDERSTANDINGS OF HIGH SCHOOL STUDENTS

Socio-economic level is often regarded as having an effect on the academic achievement and knowledge of students. Socio-economic level is usually based on one or more of the following variables:

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[14]Clark. op. cit., p. 57.

[15]Campbell, op. cit., p. 36.

parents' occupation, highest level of parents' education, place of residence, or income. These may be weighted in various ways.

Jelley[16] divided the subjects of his study into three classes, upper, middle, and lower, based on the Minnesota Occupation Scale. Jelley found a significant difference (.05 level) between the upper, middle, and lower socio-economic groups in all cases except "Managing Personal Finances" where there was no significant difference between the middle and lower group. In the areas of Borrowing Money and Using Credit, and also Insurance, significant differences were found, with the higher socio-economic groups scoring higher than the middle and lower groups. Jelley concluded that the lower socio-economic group particularly required information in consumer education, and that courses should be devised to meet their needs and abilities.

> The lower socio-economic group can ill afford the losses from poor financial management . . . these are the youth who will most likely be the focus of exploitation by unethical lenders . . . Thus, a special case can be made for educating this group for wise and efficient money management . . . Even the middle and upper socio-economic groups did not get high scores--they too can benefit.[17]

Using parents' occupation as the criterion for socio-economic level, Ousdigian[18] found that socio-economic level was not a factor in economic understanding. His hypotheses that there were no differences between the mean scores of all occupation groups was accepted.

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[16]Delta Pi Epsilon, op. cit., p. 12.

[17]Jelley, op. cit., p. 208.

[18]Ousdigian, op. cit., p. 62.

Clark[19] classified his population into four categories based on the following parental occupations: Professional and Semi-Professional, Managerial and Retail, Skilled Trades, and Semi-skilled and Labor. Clark, too, found that the parents' occupation had no significant effect on students' economic understanding.

Campbell,[20] in his study of economic understandings, based his socio-economic groupings on the educational level, as well as on the occupation of the parents. The occupational level of the parental head of the family was determined by means of a scale including the following seven points:

1. Executives and proprietors of large concerns, and major professionals.
2. Managers and proprietors of medium-sized businesses and lesser professionals.
3. Administrative personnel of large concerns, owners of small independent businesses, and semi-professionals.
4. Owners of little business, clerical and sales workers, and technicians.
5. Skilled workers.
6. Semi-skilled workers.
7. Unskilled workers.

The parental educational level was determined by means of a scale including the following seven points:

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[19] Clark. op. cit., p. 8.

[20] Campbell, op. cit., pp. 32-33.

1. Graduate professional training.
2. Standard college or university graduate.
3. Partial college training.
4. High school graduate.
5. Partial high school.
6. Junior high school.
7. Less than seven years of school.

The final socio-economic status score was obtained by weighting and combining these scales. The parental occupation scale was multiplied by nine, and the educational scale was multiplied by five, providing a possible range from 14 to 98 for socio-economic level.

Campbell[21] found a significant difference (.05 level) among the high, average, and low socio-economic levels. The mean scores of the three socio-economic groups were as follows:

High	26.170
Average	23.482
Low	21.730

An examination of the findings of the foregoing studies indicates that there was no general agreement on the effect of socio-economic level on pupils' knowledge of money management or economics. However, lack of agreement on the effect of socio-economic level may be attributable to the differences in indicators used to determine socio-economic level. Jelley, Clark and Ousdigian used parental occupation alone, while Campbell used a combination of parental occupation and educational level.

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[21] Ibid., p. 53.

EFFECT OF SEX ON ECONOMIC UNDERSTANDINGS OF HIGH SCHOOL STUDENTS

A number of studies considered the effects of sex on economics, money management, and general business understandings of high school students. Jelley found that there was no significant difference in money management understandings on Personal Finance and Budgets or on Borrowing Money and Using Credit. On the topic of Insurance the male students scored significantly higher than female students. Jelley concluded that courses in Economics were equally important for the girls as for the boys.

Campbell's[22] study indicated that the factor of sex was significant for the high and average ability groups and for the high and average categories of socio-economic status, with the scores of male students higher than those of female students. The factor of sex was not significant for low ability groups nor for the low socio-economic levels.

Sheldon[23] found that in the superior and above average ability groups the boys scored significantly higher than the girls in selected business understandings, skills and abilities. There was no significant difference between the scores of the boys and girls in the average and lower ability groups.

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[22] Ibid., p. 53.

[23] Sheldon, op. cit., p. 74.

The sex variable was not considered in the Clark study, nor was it considered by Ousdigian.

Conclusions resulting from a review of the literature on economics, money management and general business are as follows:

1. Economic and money management understandings are positively related to intelligence.

2. Economic and money management understandings of high school students appear to be low as compared to the concepts required in modern living.

3. Male students, especially in the average and above average ability groups appear to have better understandings of economic concepts than do female students.

4. The effect of socio-economic background on economic understandings of students is not clearly established.

5. Courses in economics and general business in developing economic understandings are generally useful to the students of average and above average ability.

6. There appears to be a need for a special course for students of low general ability.

CHAPTER III

SOURCES OF DATA AND PROCEDURE

Chapter III describes the instrument used to measure money management understandings, the classification of socio-economic status and mental ability, the population, the test procedures, and the method of analysis of the data.

THE MEASURING INSTRUMENT

The test, "Money Management Understandings",[1] prepared by Jelley was the instrument used in this study to measure students' understandings of money management. In 1958 Jelley prepared the test, and used it to test the money management understandings of grade twelve students in the city of Cincinnati, Ohio.

The sixty multiple choice items of Jelley's test were divided into the following three areas or topics of money management: Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance. Seventeen of the items (1 - 8 and 31 - 39) were related to the area of borrowing money and using credit; eighteen of the items (9 - 17 and 40 - 48) were related to the area of personal finance and budgets; and the remaining twenty-five items (18 - 30 and 49 - 60) were related to the area of insurance.

The topics, and the corresponding number of items relating to each sub-topic, are shown in the following table.

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[1]Appendix A.

TABLE I

DISTRIBUTION OF TEST ITEMS ACCORDING TO TOPIC AND SUB-TOPIC

TOPICS	SUB-TOPICS	NUMBER OF ITEMS	
Borrowing Money and Using Credit	Credit Rating	4	
	Charge Accounts	3	
	Installment Credit	3	
	Computing Finance Charges	3	
	Types of Loans Available	4	
	Sub-total		17
Personal Finance and Budgets	Records	3	
	Budgets	3	
	Reasons for Saving	3	
	Planning for Saving	3	
	Banking and Cheques	6	
	Sub-total		18
Insurance	Need for Insurance	4	
	Unemployment Insurance	4	
	Need for Life Insurance	4	
	Types of Policies	4	
	Accident and Health Insurance	4	
	Automobile Insurance	4	
	Personal Liability	1	
	Sub-total		25
	TOTAL		60

For the purpose of selecting items for his test, Jelley examined eight textbooks on consumer education and general business to determine the amount of space devoted to each topic. To check the validity of using relative proportion of textbook space as an index of importance of topic, a jury was asked to rate the importance of each topic. The jury consisted of twenty-six experts in the field of business education.

The editors of Delta Pi Epsilon state:

> The validity of the selection of topics around which to build test items is thus based on expert judgment; the judgment of textbook writers as inferred from the space they devote to each topic--as checked independently by a jury of qualified persons.[1]

After revisions and refinements, Jelley's test was administered to 83 seniors in one Cincinnati parochial high school. Item analysis established that every item of the sixty-item test was found to discriminate at the .01 level of confidence. The reliability coefficient of the total test was .87. Readability formulae indicate that the reading level of the test was at approximately the seventh grade level, which is well below the reading level of the students to whom the test would be administered. According to Jelley, one of the outcomes of the study was "a measuring instrument which is validated statistically."[2]

Since Jelley's test was designed for measuring money-management understandings of high school students in the United States, some of the items were not applicable for use in Canada. These specific items were therefore revised, and submitted to experts in the fields of banking and accounting for approval. A statement of the changes made, and the

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[1]Delta Pi Epsilon, op. cit., p. 3.

[2]Jelley, op. cit., Chapter VII.

revised test, appear in Appendix A.

A purpose of the present study is to determine whether the course, Business Fundamentals 10, contributes significantly to the money management understandings of high school students. Hypothesis 5 compares the differences in money management understandings of students who had taken the course, Business Fundamentals 10, and those who had not. For this reason, it was necessary to examine the appropriateness of the test items for measuring the outcomes of the course, Business Fundamentals 10.

By means of a careful examination of both the Business Fundamentals text[3] and the test items, the investigator found that every item of the test instrument was in some measure dealt with in the textbook. Three chapters of the text, IV, V, and VII provide information on the topic, "Borrowing Money and Using Credit". Personal Finance and Budgets are included in Chapters IV, V, VI, VIII, and IX. Insurance is discussed in Chapters II, II, and XX. It was concluded, therefore, that the test was a suitable instrument for measuring money management understandings of students enrolled in Business Fundamentals 10.

However, there was no assurance that the whole course was covered by all students. Since the students included in the study took Business Fundamentals for three credits -- three 40-minute periods per week -- they might not have completed a study of all the topics in the text.

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[3]Graham, Bruce, Robert H. Heywood and William T. Abercrombie, Business Fundamentals, rev. ed. (Toronto: McGraw-Hill Co. of Canada Ltd., 1961.)

The Senior High School Curriculum Guide for Alberta states:

> It is not expected that the students will make an exhaustive study of these topics, for any one of them could be expanded to provide material for a whole year's work.[4]

THE MEASUREMENT AND CLASSIFICATION OF SOCIO-ECONOMIC STATUS

There appears to be no general agreement on the best measure of socio-economic status. Hollingshead[5] recommends three factors: address, occupation, and education. Blishen[6] developed a scale using the factors of occupation, average income, and schooling. In the studies of Jelley,[7] Clark,[8] and Ousdigian,[9] parental occupation alone was the predictor. Campbell[10] based his socio-economic level on two variables -- occupation and education. Campbell's study concerned students in the City of Regina, Saskatchewan, and as there appeared to be no great differentiation in respect to location, that factor was

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[4]Department of Education, Government of the Province of Alberta, Senior High School Curriculum Guide (Edmonton: Queen's Printer, 1964).

[5]August B. Hollingshead and Fredrick C. Redlich, Social Class and Mental Illness: A Community Study, (New York: John Wiley and Sons, Inc., 1958), pp. 390-391.

[6]Bernard R. Blishen, "The Construction and Use of an Occupational Class Scale," Canadian Journal of Economics and Political Science, Vol. 24, pp. 521-533, November, 1958.

[7]Jelley, op. cit., Ch. III.

[8]Clark. op. cit., p. 52.

[9]Ousdigian, op. cit., p. 62.

[10]Campbell, op. cit., p. 32.

eliminated from the study. Occupation was felt to be of major importance by Campbell, and was rated 9 to 5 in comparison with education.

The present study also eliminated the location as a factor in determining socio-economic level. It cannot be said that in the Viscount Bennett area of Calgary there would be any differences in socio-economic level based on the person's address.

In the present study, socio-economic standing was determined by using two variables, parents' occupation, and parents' educational level. From the students' answer sheets (Appendix B) the exact occupation of each of the parents, and also the educational level reached by each was obtained. The occupations of both parents were recorded from the following seven-point scale:

Unskilled workers	1
Semi-skilled workers	2
Skilled workers	3
Owners of small businesses, clerical and sales workers, and technicians	4
Administrative personnel of large concerns, owners of small independent businesses and semi-professionals	5
Managers and proprietors of medium sized businesses and lesser professionals	6
Executives and proprietors of large concerns and major professionals	7

Similarly, the educational level was obtained, with the lowest numbers given to the lowest level of educational attainment, according to the following seven-point scale:

Less than Grade VIII	1
Junior High School	2
Partial High School	3
High School	4
Partial University training	5
University Graduate	6
Post Graduate	7

For the purposes of this study the higher of the two parents' scores was used as the final score in determining socio-economic level.

Because the occupational factor is frequently considered a better predictor of socio-economic level than education, the occupation score was multiplied by 9, and the education score by 5. This provided a possible range for socio-economic level from 14 to 98.

Socio-Economic scores from 14 to 44 were designated as low, scores from 45 to 68 were designated as average, and scores from 69 to 98 were designated as high, according to Table II.

CLASSIFICATION OF MENTAL ABILITY

The level of general ability of students was determined by I. Q. scores as shown on the Cumulative Records in the Guidance Department of the school. The Otis Quick-scoring Mental Ability Test score was available, and was recorded by the investigator on each student's answer sheet. I. Q. scores from 81 to 107 were designated as low, scores from

TABLE II

DISTRIBUTION OF STUDENTS BY SOCIO-ECONOMIC LEVEL

GROUP	SCORES	N	PER CENT
LOW	14 - 44	96	23.8
AVERAGE	45 - 68	224	55.6
HIGH	69 - 98	83	20.6
		403	100.0

108 to 123 were designated as average, and scores from 124 to 145 were designated as high. The distribution according to these categories appears in Table III.

TABLE III

DISTRIBUTION OF STUDENTS BY MENTAL ABILITY

GROUP	SCORES	N	PER CENT
LOW	81 - 107	87	21.6
AVERAGE	108 - 123	222	55.1
HIGH	124 - 145	94	23.3
	Totals	403	100.0

THE POPULATION

The money-management test was administered to the 420 Grade X students in attendance at Viscount Bennett High School, Calgary, Alberta, in June, 1964. Of the 420 students who were present for the writing of the test, seventeen students failed to supply sufficient information, and therefore had to be eliminated from the study. Thus, 403 students represent the population of this study.

Of the 403 students tested, 77 (45 boys and 32 girls) were registered in the Business Fundamentals 10 course; while 326 students (151 boys and 175 girls) were designated as non-Business Fundamentals students.

ADMINISTRATION OF MONEY-MANAGEMENT TEST

The Revised Test of Money Management Understandings was administered to all the Grade X students in Viscount Bennett High School on June 5, 1964. All teachers supervising the administration of the test were given instructions by the investigator, and were provided with copies of Directions to Presiding Teachers. A copy of this instruction sheet appears in Appendix C. Preliminary to the test the students were asked to fill in the personal data asked for on the answer sheet. These answers gave the parents' occupations and educational levels, and were necessary in determining socio-economic status. The information on the questionnaire was verified by a comparison with the records in the school guidance department, and by checking a number of occupations of parents as listed by the students.

Students were asked to read the page of instructions and information regarding the test itself. Forty minutes were then allowed to answer the sixty multiple-choice test items. This time allotment was found to be sufficient to enable all students to complete the test.

METHOD OF ANALYSIS

The test papers were marked by the investigator, providing scores on (A) Borrowing Money and Using Credit, (B) Personal Finance and Budgets, (C) Insurance, and the total Money Management test. The socio-economic score for each student was calculated, with scores ranging from 14 to 98. These scores were then classified into three categories, high, medium and low. The I.Q. of each student was recorded, and these, too, were

classified as high, medium and low. The sex category of each student was also recorded.

Appendix D shows the raw data giving complete results and binary coded information for each student which was entered on key punch cards. It was then possible to prepare models and equations, using multiple linear regression techniques, to test the various hypotheses. The analysis was carried out on the University of Alberta I B M - 7040 Computer using programs explained by the Division of Education Research Services, Faculty of Education.

The advantages of this procedure are many, and are summarized in the following paragraph:

> The application of the multiple linear regression approach, while powerful, is direct and conceptually simple. It is especially suited to binary coded information. Multiple linear regression was developed from analysis of variance and co-variance, and is the most versatile and powerful research tool now available.[11]

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[11]Bottenberg and Ward, "Applied Multiple Linear Regression," Technical Documentary Report, Lackland Air Force Base, Texas, 1963, Preface.

CHAPTER IV

THE FINDINGS OF THE STUDY

The purpose of this study was to investigate the Money Management Understandings of Grade X students in Viscount Bennett High School, Calgary. A test on money management understandings, consisting of three parts: Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance was administered to 403 Grade X students. The mean scores and standard deviations obtained on each of the three sections, and on the total test, are shown in Table IV.

TABLE IV

MEANS AND STANDARD DEVIATIONS OF EACH OF THREE SECTIONS OF A MONEY MANAGEMENT TEST ADMINISTERED TO 403 GRADE X STUDENTS

TEST SECTION	NUMBER OF TEST ITEMS	MEANS	STANDARD DEVIATIONS
Borrowing Money and Using Credit	17	77.7	1.83
Personal Finance and Budgets	18	11.84	2.25
Insurance	25	12.46	2.90
Total test	60	32.07	5.11

The actual percentages obtained on the test are:

Borrowing Money and Using Credit	45.9%
Personal Finance and Budgets	65.8%
Insurance	49.84%
Total	53.45%

In testing the hypotheses, the multiple linear regression technique was used. This is excellent for regression studies where the experimenter is testing a stated hypothesis, and is well suited to computer capabilities. Use of this analysis does not necessitate normality of distribution. The general approach to testing a hypothesis is to express it in the form of a model,[1]

X(1) = A2 X(2) + A3 X 3) + A4 X(4) + error

where X(1) is the total performance of N persons

X(2) is the number of persons in A group

X(3) is the number of persons in B group

X(4) is the number of persons in C group

error is a column of N numbers which for each person is the difference between the observed and the estimated score.

A2, A3, A4 are numbers (weights) to be estimated to minimize the sum of squares of the error column (minimize ESS). These weights are also defined as follows:

A2 mean of group A
A3 mean of Group B
A4 mean of Group C[1]

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[1]Hunka, S. Multiple Linear Regression (Student Notes, Part II) Division of Education Research Services, University of Alberta, December 1965, p. 2.

Equations were then written for computer solution. The results as printed by the computer appeared in the following order:

F-ratio, Degrees of Freedom Numerator, Degrees of Freedom Denominator, R^2 unrestricted, R^2 restricted, and Probability.

FINDINGS RELATED TO THE HYPOTHESES

Hypothesis 1

There is no significant difference in measured money-management understandings of male and female students.

In testing this hypothesis, Criterion 4 (total Money Management test scores) and Predictors, 15 and 16 (Male and Female) were used. The findings pertaining to the relationship between the sexes, arranged according to Quinn's[2] study are:

R^2u	R^2r	d/f (Num/den)	F	Probability	Significance
.0094	.0000	1/402	2.821	.05126	N.S.

This does not quite show significance at the .05 level. In comparing the F-ratio of 3.821 with the "F" tables in Ferguson[3] it was found that an F-ratio of 3.86 would be required for significance with 1/400 degrees of freedom. We may conclude that there is no difference between the sexes in their knowledge of money management.

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[2]Joseph W. Quinn, An Investigation of Personality and Cognitive Correlates of Religious Devoutness, Unpublished Doctoral Dissertation, University of Alberta, Edmonton, June, 1965, p. 43.

[3]George A. Ferguson, Statistical Analysis in Psychology and Education, McGraw-Hill Book Company, Inc., Toronto, 1959, p. 313.

Hypothesis 2

There is no significant difference in measured money-management understandings among students of high, average, or low socio-economic level.

Using Criterion 4 (Total Money Management Scores) and Predictors 12 (S. E. S. high), 13 (S. E. S. medium) and 14 (S. E. S. low), the findings pertaining to the relationship between money management understandings and socio-economic level are as follows:

R^2u	R^2r	d.f. num/den	F	Probability	Significance
.0109	.0000	2/401	4.4004	.03652	.05

This hypothesis is significant at the .05 level, and must be rejected. There is a significant difference in money management understandings among the students of high, average, and low socio-economic level, with the students of high socio-economic level scoring higher than those of average and lower levels.

Hypothesis 3

There is no significant difference in Measured Money Management Understandings of students of high, average, or low ability groups.

Criterion 4 (Scores on M. M. test) and Predictors 9, 10 and 11 (High, Average and Low ability groups) were used in testing this hypothesis.

R^2u	R^2r	d.f. num/den	F	Probability	Significance
.1722	.0000	2/401	83.4132	.00001	.01

Hypothesis 3 is therefore rejected, because there is a very significant difference between the scores on the money management test according to mental ability. The students of higher ability scored significantly higher than those of average ability; and similarly, those of average ability scored significantly higher than those of lower ability.

Hypothesis 4

(a) There is no interaction on the students' scores of measured money-management understandings between sexes and socio-economic levels.

(b) There is no interaction on the students' scores of measured money management understandings between sexes and ability levels.

(c) There is no interaction on the students' scores of measured money management understandings between socio-economic levels and ability levels.

(d) There is no interaction on the students' scores of measured money management understandings among sexes, socio-economic levels and ability levels.

TABLE V

SUMMARY OF FINDINGS PERTAINING TO INTERACTIONS OF STUDENTS' SCORES IN HYPOTHESIS 4

	R^2u	R^2r	d/f. num/den	F	Probability	Significance
(a)	.0259	.0206	2/401	1.0938	.33605	N. S.
(b)	.1910	.1867	2/401	.3510	.90775	N. S.
(c)	.2072	.2072	4/399	.0088	.92536	N. S.
(d)	.2320	.2314	4/399	.2738	.60131	N. S.

All four parts of Hypothesis 4 are therefore accepted. The various interactions did not indicate any significant differences.

Hypothesis 5

There is no significant difference in measured money-management understandings between students who have taken the course, Business Fundamentals 10, and those who have not, when adjustment has been made for ability and socio-economic level.

R^2u	R^2r	d.f. num/den	F	Probability	Significance
.2607	.2072	1/402	28.9148	.00001	.01

Hypothesis 5 must be rejected. There is a very significant difference between the scores on the money management test of those who had taken the course, "Business Fundamentals 10", and those who had not.

The adjusted mean score for Non-Business Fundamentals students on the 60-item test was 31.53, and the adjusted mean score for the Business Fundamentals students was 34.564 with a difference of 3.034. While the results show that in practically every instance, students having taken the course, Business Fundamentals, will do better than those who have not, the gain was not great, and the scores obtained were still low. This agrees with Campbell's findings, where after adjustment for socio-economic level and ability, the Economics students scored 25.112 and the others 21.410 out of a possible 50.[4]

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[4]Campbell, op. cit., p. 50.

Hypothesis 6

There is no significant difference among students by sex, intelligence, and socio-economic level in their knowledge of borrowing money and using credit.

TABLE VI

DIFFERENCES OF STUDENTS BY (A) SEX, (B) INTELLIGENCE, AND (C) SOCIO-ECONOMIC LEVEL IN THEIR KNOWLEDGE OF BORROWING MONEY AND USING CREDIT

	R^2u	R^2r	d.f. num/den	F	Probability	Significance
(A)	.0109	.0000	1/402	4.4299	.03590	.05
(B)	.0586	.0000	2/401	12.5083	.00001	.01
(C)	.0050	.0000	2/401	1.0165	.36293	N. S.

Hypothesis 6 (a) is rejected. The boys scored significantly higher than the girls in their knowledge of Borrowing Money and Using Credit.

Hypothesis 6 (b) is rejected. There is a very significant difference in the students' knowledge of Borrowing Money and Using Credit among the high, average and low ability groups, with the students of high ability scoring significantly higher than the others.

Hypothesis 6 (c) is accepted. It appears that socio-economic level does not affect a student's knowledge of Borrowing Money and Using Credit.

Hypothesis 7

There is no significant difference among students by sex, intelligence, or socio-economic level in their knowledge of Personal Finance and Budgets.

TABLE VII

DIFFERENCES OF STUDENTS BY (A) SEX, (B) INTELLIGENCE, AND (C) SOCIO-ECONOMIC LEVEL IN THEIR KNOWLEDGE OF PERSONAL FINANCE AND BUDGETS

	R^2u	R^2r	d.f. num/den	F	Probability	Significance
(A)	.0003	.0000	1/402	.1401	.70856	N. S.
(B)	.0846	.0000	2/401	18.5672	.00001	.01
(C)	.0007	.0000	2/401	.1494	.86151	N. S.

There was no significant difference between the sexes in their scores on Personal Finance and Budgets. Hypothesis 7 (a) is therefore accepted. Hypothesis 7 (b) that there is no difference between students by ability in their knowledge of Personal Finance and Budgets is rejected. Again it is found that there is a very definite relationship between intelligence and money management understandings. Socio-economic level did not affect the knowledge of the students in their knowledge of Personal Finance and Budgets, so Hypothesis 7 (c) is accepted.

Hypothesis 8

There is no significant difference among students by (a) sex, (b) intelligence, or (c) socio-economic levels in their knowledge of Insurance.

TABLE VIII

DIFFERENCES OF STUDENTS BY (A) SEX, (B) INTELLIGENCE AND (C) SOCIO-ECONOMIC LEVEL IN THEIR KNOWLEDGE OF INSURANCE

	R^2u	R^2r	d.f. num/den	F	Probability	Significance
(A)	.0083	.0000	1/402	3.3450	.06810	N. S.
(B)	.1259	.0000	2/401	28.9593	.00001	.01
(C)	.0167	.0000	2/402	3.4216	.03357	.05

No significant differences were found between the sexes in their knowledge of Insurance. There continues to be a significantly high difference by intelligence or mental ability, with the higher ability students scoring significantly higher than the lower groups. There was a significant difference (.05 level) among the scores on Insurance of the various socio-economic groups.

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(c)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(d)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(e)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

It was only in the topic, Borrowing Money and Using Credit, that there was any significant difference between the scores obtained by the different sexes. Here the boys scored significantly higher than the girls. In the topics, Personal Finance and Budgets, and Insurance, there were no significant differences between the scores of the boys and girls.

In all three sub-topics, Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance, there were very significant differences among the three ability or intelligence groups.

The different socio-economic levels did not produce any significant differences in the scores on Borrowing Money and Using Credit, nor in the scores on Personal Finance and Budgets. There was, however, a significant difference among the Insurance scores of the high, average and low socio-economic levels.

It was found that students who had taken the course, Business Fundamentals 10, scored significantly higher on the money management test than students who had not taken the course.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It was stated in Chapter I of this study that there were definite needs for investigation and research into the money management understandings of high school students. The average amount of money spent by students (U. S.) has risen from $2.50 a week in 1947 to $10.00 a week in 1962, and the increase has been considerable since that time. There is a trend toward teenagers, and younger children too, making their own choices and decisions in spending their allowances and money received from part-time employment.

There is cause for parents and teachers to be concerned over the manner in which this money is spent. First, the dollars spent are votes on future economic policy. Collins says, "The decisions they (students) make each time they spend money helps to determine supply and demand."[1] Secondly, the majority of the population are young people--over 50% of Canada's population is under age 25. Thirdly, serious financial and social problems are the result of poor money management, excessive credit buying, high interest rates, and unethical business practices.

This study investigated the effects of sex, socio-economic level, intelligence, and a high school course in Business Fundamentals on students' money management understandings. Three areas of money management--Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance--were considered separately in the investigation.

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[1]Collins, Irma K. Business Education World, November, 1964, p. 25.

A revised edition of Jelley's Test of Money Management Understandings[2] was used as the measuring instrument. Over four hundred Grade X students, of which seventy-seven had taken the course Business Fundamentals 10, were tested on their understandings of money management. The data for students was entered on key punch cards, and then analyzed on the University of Alberta computer using multiple linear regression techniques in order to test the various hypotheses. The specific findings relating to the hypotheses were given in Chapter IV.

CONCLUSIONS

The following statements are conclusions drawn from the findings of this study. It should be pointed out that these conclusions must apply only to Viscount Bennett High School.

Students who took the course "Business Fundamentals 10" did better on the Money Management Test than those who did not. Presumably, a course in Business Fundamentals increased the students' understanding of money management.

Students of higher ability did better on the test than students of average ability. Likewise, students of average ability did better than those of lower ability. This was found to be true on all three areas of the test: Borrowing Money and Using Credit, Personal Finance and Budgets, and Insurance.

In comparing money management understandings by sex, the results of the study indicate that in only one area, Borrowing Money and Using Credit, was there any difference, and here the boys did significantly

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[2]Appendix A.

better than the girls. In the other areas there was no significant difference in money management scores between the sexes.

The higher socio-economic groups did better on the total money management test than the average and lower groups. This was particularly noted on the topic "Insurance", where the students in the higher socio-economic levels did considerably better than the other two groups. The students of average socio-economic level also scored higher than the students of lower socio-economic level. This appears to be a reasonable conclusion as the families in the higher socio-economic levels are likely to purchase more life insurance, automobile insurance, and other types of insurance than those of the lower socio-economic levels.

RECOMMENDATIONS

This study investigated several factors which may affect money management understandings of Grade X students. The study was intended to provide data for further investigation on such questions as: "What knowledge of money management do young people have?" and, "How helpful is a course in money management in imparting such knowledge?"

Specific recommendations for further study follow:

1. Jelley's test should be administered to measure the comparative achievements of students taking the five-credit Business Fundamentals course and others taking the three-credit course.
2. A study should be made of the usefulness of the Consumer Education section of Social Studies 10. The amount of instructional time actually devoted to this topic might also be investigated.

3. Consideration should be given to the development of special courses for students of varying ability and socio-economic levels.
4. The relationship of sex, socio-economic status, intelligence, and a Business Fundamentals course on the individual test items of the money management test should be analyzed.
5. A comparative study of money management understandings of urban and non-urban students of Alberta should be undertaken.
6. A study should be undertaken to investigate the relationship of teacher preparation in areas of general business, and student achievement in money management understandings.
7. The effect of a Business Fundamentals course on money-management understandings could be assessed by means of a comparison of students' scores on a pretest and a post test.
8. A comparative study of money management understandings of adults and high school students should be undertaken in order to determine the effect of actual business experiences on their understandings.
9. A study should be undertaken to investigate the relationship of student income and money management understandings.
10. The relationship between achievement in Social Studies and the achievement in a money management test should be investigated.
11. The validity of the test of money management should be investigated by examining students' application of concepts to money management problems. This would indicate the correlation between actual behavior and the money-management test score.

12. Consideration should be given to a special course to assist students of low ability and low socio-economic status in dealing with the subjects of Insurance and Credit Buying.

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APPENDIX A

TEST OF MONEY MANAGEMENT UNDERSTANDINGS (Jelley)

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

This is a test of your money management understandings. After each of the questions listed on the following pages, there are four choices. From these you are to choose the one which best answers the question.

You are to record your answers on a separate answer sheet rather than on the pages of the test booklet. DO NOT MAKE ANY MARKS OR RECORD ANY ANSWERS ON THE PAGES OF THIS TESTBOOKLET

Your answer sheet will be scored accurately if you observe carefully the following directions:

1. On the answer sheet find the row of answer squares which is numbered the same as the question you are answering.

2. Then find the square which corresponds to the answer you choose and mark an X in the square. MISPLACED ANSWERS ARE COUNTED AS WRONG ANSWERS.

3. If you change your answer, erase your first mark completely.

PRACTICE PROBLEM:

Where is the safest place to keep large amounts of money?

A. In your billfold or purse.
B. Hidden in an attic of your house.
C. In a bank
D. In a pocket of a coat which is never worn.

The correct answer is "in a bank"; so the letter C is the correct choice. Notice that opposite the work "SAMPLE" on your answer sheet, an X has been made in the square in row C.

Attempt to answer every item, but do not be discouraged if you find some of the problems too hard. Go right on, as there will be easier ones later.

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   B. Go to the Chamber of Commerce and take a pledge.
   C. Make friends with your neighbors and have them sign for you.
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   A. Trading stamps are given in stores which sell only for cash.
   B. Stores which sell only for cash have better quality of goods.
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   D. People from the upper classes trade in stores which sell only for cash.

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    A. Hire an accountant to do the budgeting.
    B. Do the budgeting himself.
    C. He and his wife should do the budgeting.
    D. The entire family should participate in the budgeting.

12. Following are some plans for saving money for a person who receives an income check once a week. Which plan is best?

    A. Everything left over when the next income check is received should be saved.
    B. Take a certain amount out of the income and save it before spending anything.
    C. Put most of the money from the check in a checking account which will grow in size if you are careful in writing checks.
    D. Everytime certain coins are received (such as quarters) they should be saved in a small bank.

13. Which of the following describes compound interest on a savings account in a bank?
    A. The interest is set aside by the bank, and you cannot get it until the end of a period of time whcih you and the bank agreed upon beforehand.
    B. The bank will pay you interest after it takes out a fee for compounding your money.
    C. When interest if figured, it is figured on the amount of money you have put in the bank plus all past interest which has been earned.
    D. The rate of int erst varies with the amount of money the bank earns each year.

14. Why are savings accounts in national banks believed to be safe?

    A. They are insured for $10,000 by the Federal Deposit Insurance Corporation.
    B. Most people think that the Federal Government would pay people for any loss suffered.
    C. The Federal Bureau of Investigation protects National Banks.
    D. The Serial numbers of all bills received and kept by these banks are sent immediately to Federal Reserve Banks.

15. Which of the following is the best reason for using bank checks to pay bills?

    A. You will earn interest on the checking account balance.
    B. The cancelled checks serve as receipts.
    C. Bank checks enable you to take a discount on bills.
    D. When bank checks are used, it is not necessary to pay bills as promptly.

16. Mr. Harry Green received a check for $30. Mr. Green wanted to send this check through the mails to John Light because he owed Mr. Light money. What is the best way for Mr. Green to endorse the check before sending it?

    A. Sign his name on the back of the check..
    B. On the back of the check write, "I will pay John Light on sight," and then sign his name.
    C. Cancel the check by writing "cancelled" on the front of the check and on the back sign his name.
    D. On the back of the check write, "Pay to the order of John Light," and then sign his name.

17. You receive a personal check from a person and endorse the check and pass it on to a store in payment for goods which you bought. The store deposits the check in their bank. The bank finds later that the check was forged by the person who gave it to you. Which of the following will be true?

    A. The bank which took the check from the store will suffer the loss.
    B. The store which deposited the check will suffer the loss.
    C. The store must make good the money to the bank, and you must make good the money to the store.
    D. The bank, the store, and you will divide the loss equally.

18. If you insure your house for $10,000, and if this costs only $16 a year, how can the insurance company pay you $10,000 if a fire destroys the house?

    A. The Government pays for losses--the $16 is to pay for rent and salaries.
    B. Money from real estate investments pays for losses.
    C. The foundation underwriting the company pays for losses.
    D. The company knows about how much it will have to pay out in losses--the $16 payment was figured accordingly.

19. Eight men get together and decide to stop paying money to insurance companies for fire insurance on their homes. Instead, they agree to pay the money into a fund of their own. Then, if there is a fire in one of their houses, the money in the fund will be paid to the owner. Which of the following is the best statement about this plan?

    A. The risk of loss because of fire is not spread enough.
    B. The eight men have learned a great deal about ecomonic laws.
    C. The eight men will save a great deal of money over several years.
    D. The idea is sound if the men want business experience, but they should not expect to save much money.

20. Which of the following is the best source for help or information if you do not understand something about your social security benefits?

    A. The nearest local social security office
    B. Your life insurance agent
    C. A public library
    D. A lawyer

21. Who pays for the Social Security program?

    A. Employees (the workers) pay for it.
    B. Employers pay for it.
    C. Employees and employers together pay for it.
    D. The federal government pays for it.

22. Which of the following is a life insurance company owned by the people who are insured?

    A. An ownership company
    B. An actuary company
    C. A stock company.
    D. A mutual company

23. Which of the following insurance policies combines savings with protection for dependents in case of death?

    A. Credit life insurance
    B. Term insurance
    C. Endowment insurance
    D. Accident and health insurance

24. Which of these life insurance policies should you buy if you want the most protection for the least amount of money?

    A. One year term policy
    B. 20 year endowment policy
    C. Whole life policy
    D. 20 payment life policy

25. A 25-year-old man is married and has a two-year-old child. The man and his wife each have a $1,000 life insurance policy which they are paying on. They decide to buy more insurance, but because the man will earn very little money for the next 5 years, they cannot spend more than $60 a year on additional insurance. How should they spend the $60?

    A. Insure the lives of father, mother, and child for $20 each.
    B. Insure the lives of father and mother for $30 each
    C. Spend all of the money insuring the life of the child.
    D. Spend all of the money insuring the life of the father.

26. When buying health and accident insurance, it is most important to insure against which of the following?

    A. Dental work
    B. Shots and vaccinations
    C. Semi-annual physical examinations
    D. Unexpected illness which would require hospitalization

27. Which of the following is most important to insure against?

    A. Polio
    B. Loss of a limb (leg or arm) in a railroad accident
    C. Scarlet fever
    D. Cost of hospital room

28. If you cannot spend much money on automobile insurance, and therefore you are going to buy just one type of insurance, which type should it be?

    A. The kind that protects you against claims for damages from other people.
    B. The kindthat protects you against total loss to your automobile because of theft.
    C. The kind that will pay you for any damages your car receives in a crash or an upset.
    D. The kind that protects you against loss to your car because of fire.

29. If you should run your car into another person's car, you would want your insurance company to pay for the damages to this other car. Which of these types of insurance would pay for this?

    A. Comprehensive insurance
    B. Liability insurance
    C. Damage insurance
    D. Collision insurance

30. Which of the following would be the wisest thing to do if you want to protect yourself against a large expense due to a crash or an upset of your car, but you must cut the cost of your insurance?

    A. Buy less liability insurance
    B. Buy comprehensive insurance instead of the other types
    C. Buy less collision insurance
    D. Buy a $100 deductible collision policy

31. When you borrow money from a bank, you usually pay back the money by making monthly payments. What will happen if you are always late in making these monthly payments?

A. Nothing will happen so long as you eventually pay back all the money you have borrowed.
B. The bank will give your loan to a small loan company after you have been late two or three times.
C. The bank will notify the local credit rating bureau that you are slow in making payments.
D. The bank will sue you for dishonesty and fraud.

32. A certain man has been so careless in paying his bills that for the past few months stores have not let him charge things. He is now moving to another state where he would like to use credit (charge things). Which of the following statements about his credit is true?

A. His bad credit reputation will follow him to the new state.
B. If he is not prompt in his payments in the new state, someone is likely to check on his past credit reputation.
C. His credit reputation will be all right if he keeps secret the names of the stores where he bought things in his old city.
D. The interstate commerce commission does not allow credit information to pass from one state to another.

33. Sometimes buying on time (buying on an installment plan) is a good thing to do. Which of the following is the best reason for buying on time?

A. You will be able to show that you pay your bills promptly so that in emergencies you can get credit easier.
B. You will keep from buying too many things.
C. You will be able to shop around at many different stores.
D. You will be able to buy things cheaper.

34. When you buy goods on time and sign a conditional sales contract, what could happen if you do not make a payment when it is due?

A. The seller can sue you for an unlimited amount of money.
B. All the money you still owe becomes due and the seller can take the goods from you if you can't pay.
C. The seller can sue you for the full amount of the goods plus all court costs.
D. The seller can't take the goods away from you, but he can turn the bill over to a collection agency.

35. You want to borrow $1,000 and pay it back over the next year by making 12 equal payments. Which of these plans would require you to pay the least interest?

A. 6 per cent on the entire $1,000.
B. ½ per cent a month on the balance still owed in any month.
C. A flat charge of $55.
D. 4 per cent on the entire $1,000 plus an administrative charge of $30.

36. From which of these four places would the cost for borrowing money usually be least?

A. Small loan company
B. Personal loan department of a bank.
C. Pawnbroker
D. Unlicensed lender

37. You borrow $300 from a bank, and you agree to pay back the $300 by making a payment each month so that by the end of 12 months, or one year, the money will be repaid. The banker tells you that the cost for this will be 6 per cent times $300 which is $18. So you really pay back $318 over the 12 months. What is the true annual interest charge?

A. About 6 per cent.
B. About 12 per cent.
C. About 18 per cent.
D. About 24 per cent.

38. Which of the following is a disadvantage of borrowing money on a life insurance policy?

A. The interest cost is usually higher than it would be at a bank.
B. The insurance premium will be increased because you will be older when the loan is paid back.
C. You may not have enough insurance protection during this time.
D. Insurance companies can require you to pay back the money at any time.

39. The small loan law, which has been passed in many states, provides for which of the following?

A. A lender cannot charge more than 42 per cent interest a year on small loans.
B. Banks must accept applications for loans from all who apply.
C. Individuals are not allowed to borrow money from more than one loan company or bank at a time.
D. The state government helps loan companies collect money from people who do not make payments when they are due.

40. When asked by a friend to go to a store to buy an ice cream soda, a 17-year-old boy said, "No, I budget my money and I cannot spend more this week on refreshments." This boy is wisest if which of the following is his reason for budgeting?

A. He impresses people with his business-like actions.
B. He is learning to discipline himself by being stingy.
C. He is practicing going without things he wants in case hard times come in the future.
D. He has some other purpose for his money which seems more important to him.

41. Two young people were recently married. Their income is $225 a month. Which of the following attitudes about keeping records and budgets is best for this couple?

A. Their income is too small to make record-keeping or budgeting possible.
B. Their income is too small for budgeting, but keeping a record of expenses is important.
C. Because of the small income and the small family, budgeting and record-keeping would not be worth the amount of work involved.
D. Both record-keeping and budgeting would be worth while for this couple.

42. Which of the following is a reason why many families give up trying to keep a budget?

A. They make their own budget forms.
B. They make their budget too complicated
C. They keep the budget too simple.
D. Their income is too low.

43. Which of the following is the best reason for saving money?

A. So that in the future you can buy something that you want.
B. To see how much money you can pile up.
C. To show your parents that you are thrifty.
D. So that you will be patriotic.

44. Which of these types of interest will earn the most money over 10 years?

A. 3 percent simple interest withdrawn every year.
B. 3 percent simple interest left in the bank to build up.
C. 3 percent interest compounded semi-annually (every half year).
D. 3 percent interest compounded annually (every year).

45. When a group of people with common interests (such as people who work for the same company) agree to bring some of their savings together and to make loans to each other at low interest rates, which of the following has been formed?

A. Consumer finance company.
B. Credit union.
C. An illegal corporation.
D. A white cross plan.

46. If you receive a check, made out to you, and if you want to deposit the whole check to your account at your bank, what could you do to make sure that the check will not be used for any other purpose?

A. On the back side of the check write: "Pay to the order of First State Bank for deposit only." Then sign your name.
B. On the back side of the check sign your name and draw a line under your signature.
C. Write across the front of the check: "Non-transferable." Then, sign your name on the back side.
D. Cancel the check by writing "Cancelled" across the front of the check with the date and your signature.

47. Which of the following is the best way to fill in the amount line when a check is written for 50 cents?

A. 0 and 50/100_____dollars.
B. _____ Only fifty cents _____dollars.
C. Fifty_____50/100 dollars.
D. No and 50/100 _____dollars.

48. The stub of a personal check is kept in the checkbook as a record. When should this stub be filled in?

A. Immediately before the check is written.
B. Immediately after the check is written.
C. At the end of the month.
D. When all the check-blanks have been used up.

49. Which of the following best tells how insurance companies stay in business?

A. Insurance is a law in this country, so the government subsidizes (gives money to) insurance companies.
B. Benjamin Franklin and other partiotic leaders wanted insurance companies to be private business and not government-owned, so they donated real estate, which now supports the companies.
C. The companies make money by insuring large numbers of people. They can tell in advance about how much they will pay in losses, so they set their rates accordingly.
D. Because insurance is so necessary, foundations give grants of money to the companies, which with payments made by people insured, keeps the companies going.

50. Which of the following is the reason for buying fire insurance on a house?

A. To reduce the chances of fire.
B. To keep the house from burning.
C. To enable you to receive money to offset the financial loss in case of fire.
D. To help you to pay for the expense of using the fire department's services.

51. What should you do if you lose your social security card?

A. Apply for a different social security number from the nearest local social security office.
B. Apply for a duplicate card with the same number from the nearest local social security office.
C. Go through probate court to get a new number.
D. There is nothing you can do, but as long as you do not change jobs, you will be covered.

52. Which of the following is the Federal Government's own program for protecting the aged and certain dependents?

A. Blue Cross Plan
B. National Mutual Pension Plan.
C. Social Security.
D. DAR Program.

53. Which of the following is true when an insurance agent collects payments for life insurance every week?

A. The insurance policy was issued by a stock company.
B. The insurance agent doesn't trust the person being insured, so he collects most often.
C. The person being insured is taking advantage of a policy which costs less per dollar of protection than other policies.
D. The insurance policy is more expensive per dollar of protection than are larger policies.

54. Which of the following kinds of insurance policies would cost the most per $1,000?

A. One-year term policy.
B. 20-year endowment policy.
C. Whole life policy.
D. 20-payment life policy.

55. A 25-year-old man with a wife and child wants an insurance policy on his own life which will give him the most insurance possible for the amount he will pay. He also wants the policy to build up a cash value over the years. Which of these types of policies should be buy?

A. An endowment policy.
B. A limited payment life policy.
C. A whole life policy.
D. A term policy.

56. A 25-year-old man is married and has 2 children under five years of age. Because he is just starting out on his job, his income is very small. He has no life insurance on himself. He can spend very little money on life insurance. Which of the following types of life insurance would be best for him?

A. A policy which would be paid up by the time he is 45 years old.
B. A policy which would pay him a lump sum in cash at the end of 20 years.
C. A policy which would protect him for 10 years, and which would have no cash value at the end of 10 years.
D. A policy which would enable his children to get a lump sum in cash when they are 18 years old.

57. A young married couple with 2 children under 10 years of age does not have health and accident insurance. Which of the following usually would be best for a family such as this one?

A. Get a family policy by joining the group plan where the father works.
B. Buy an individual family policy.
C. Buy an individual policy for each member of the family.
D. Each month, put in the bank a certain amount of money which can be used when needed for medical purposes.

58. Which of the following hospitalization plans is sponsored by hospitals and run on a nonprofit basis?

A. Hospital security.
B. National Mutual Insurance Plan.
C. Blue Cross.
D. White Cross.

59. Which of the following would you drop if your car is getting old and you want to save money by dropping some insurance?

A. The kind that protects you against claims for damages from other people.
B. The kind that protects you against total loss to your car because of theft.
C. The kind that will pay you for any damages your car receives in a crash or an upset.
D. The kind that protects you against loss to your automobile because of fire.

60. Which of the following should you buy if you want to protect yourself against a court claim because of the possibility of your dog biting someone who visits you?

A. Personal liability insurance.
B. Accident insurance.
C. Health Insurance.
D. Canine insurance.

REVISIONS

The changes which were made in Jelley's Test of Money Management Understandings to more closely reflect Canadian business practices were as follows:

The term "Social Security" was changed to "Unemployment Insurance" throughout.

The American spelling "check" was changed to "cheque."

The word "state" was changed to "province."

Question 14(A) read as follows:

> "They were insured for $10,000 by the Federal Deposit Insurance Corporation."

This was changed to

> "They are required by the Federal Bank Act to maintain certain deposit reserves."

Question 31-A. The words "plus interest" were added.

Question 39-A. The sentence "A lender cannot charge more than 42 percent interest a year on small loans" was changed to "A lender cannot charge more than 2% interest per month on small loans."

Question 52-A. "Social Security" was changed to "Old Age Security Tax."

Question 52-D. "DAR Program" was changed to "Dominion Government Annuity."

TEST OF MONEY MANAGEMENT UNDERSTANDINGS (Revised)

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

This is a test of your money management understandings. After each of the questions listed on the following pages, there are four choices. From these you are to choose the one which best answers the question.

You are to record your answers on a separate answer sheet rather than on the pages of the test booklet. DO NOT MAKE ANY MARKS OR RECORD ANY ANSWERS ON THE PAGES OF THIS TESTBOOKLET.

Your answer sheet will be scored accurately if you observe carefully the following directions:

1. On the answer sheet find the row of answer squares which is numbered the same as the question you are answering.

2. Then find the square which corresponds to the answer you choose and mark an X in the square. MISPLACED ANSWERS ARE COUNTED AS WRONG ANSWERS.

3. If you change your answer, erase your first mark completely.

PRACTICE PROBLEM:

Where is the safest place to keep large amounts of money?

A. In your billfold or purse.
B. Hidden in an attic of your house.
C. In a bank
D. In a pocket of a coat which is never worn.

The correct answer is "in a bank"; so the letter C is the correct choice. Notice that opposite the word "SAMPLE" on your answer sheet, an X has been made in the square in row C.

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   A. Tell the credit manager at the store why you can't make the payment when it is due.
   B. Borrow money from a bank so that you can make the payment when it is due.
   C. Pretend that you forgot the payment, then make it as soon as you have the money.
   D. Return the television set and tell the store that it was not satisfactory.

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    B. Take a certain amount out of the income and save it before spending anything.
    C. Put most of the money from the cheque in a chequing account which will grow in size if you are careful in writing cheques.
    D. Everytime certain coins are received (such as quarters) they should be saved in a small bank.

13. Which of the following describes compound interest on a savings account in a bank?

    A. The interest is set aside by the bank, and you cannot get it until the end of a period of time which you and the bank agreed upon beforehand.
    B. The bank will pay you interest after it takes out a fee for compounding your money.
    C. When interest is figured, it is figured on the amount of money you have put in the bank plus all past interest which has been earned.
    D. The rate of interest varies with the amount of money the bank earns each year.

14. Why are savings accounts in Chartered Banks believed to be safe?

    A. They are required by the Federal Bank Act to maintain certain deposit reserves.
    B. Most people think that the Federal Government would pay people for any loss suffered.
    C. The Federal Bureau of Investigation protects National Banks.
    D. The Serial numbers of all bills received and kept by these banks are sent immediately to Federal Reserve Banks.

15. Which of the following is the best reason for using bank cheques to pay bills?

    A. You will earn interest on the checking account balance.
    B. The cancelled cheques serve as receipts.
    C. Bank cheques enable you to take a discount on bills.
    D. When bank cheques are used, it is not necessary to pay bills as promptly.

16. Mr. Harry Green received a cheque for $30. Mr. Green wanted to send this cheque through the mails to John Light because he owed Mr. Light money. What is the best way for Mr. Green to indorse the cheque before sending it?

    A. Sign his name on the back of the cheque.
    B. On the back of the cheque write, "I will pay John Light on sight," and then sign his name.
    C. Cancel the cheque by writing "cancelled" om the front of the cheque, and on the back sign his name.
    D. On the back of the cheque write, "Pay to the order of John Light," and then sign his name.

17. You receive a personal cheque from a person and endorse the cheque and pass it on to a store in payment for goods which you bought. The store deposits the cheque in their bank. The bank finds later that the cheque was forged by the person who gave it to you. Which of the following will be true?

    A. The bank which took the cheque from the store will suffer the loss.
    B. The store which deposited the cheque will suffer the loss.
    C. The store must make good the money to the bank, and you must make good the money to the store.
    D. The bank, the store, and you will divide the loss equally.

18. If you insure your house for $10,000 and if this costs only $16 a year, how can the insurance company pay you $10,000 if a fire destroys the house?

    A. The Government pays for losses--the $16 is to pay for rent and salaries.
    B. Money from real estate investments pays for losses.
    C. The foundation underwriting the company pays for losses.
    D. The company knows about how much it will have to pay out in losses---the $16 payment was figured accordingly.

19. Eight men get together and decide to stop paying money to insurance companies for fire insurance on their homes. Instead, they agree to pay the money into a fund of their own. Then, if there is a fire in one of their houses, the money in the fund will be paid to the owner. Which of the following is the best statement about this plan?

    A. The risk of loss because of fire is not spread enough.
    B. The eight men have learned a great deal about economic laws.
    C. The eight men will save a great deal of money over several years.
    D. The idea is sound is the men want business experience, but they should not expect to save much money.

20. Which of the following is the best source for help or information if you do not understand something about your Unemployment Insurance benefits?

    A. The nearest local Unemployment Insurance office.
    B. Your life insurance agent
    C. A public library
    D. A lawyer.

21. Who pays for the Unemployment Insurance program?

    A. Employees (the workers) pay for it.
    B. Employers pay for it.
    C. Employees and employers together pay for it.
    D. The federal government pays for it.

22. Which of the following is a life insurance company owned by the people who are insured?

    A. An ownership company.
    B. An actuary company.
    C. A stock company.
    D. A mutual company.

23. Which of the following insurance policies combines savings with protection for dependents in case of death?

    A. Credit life insurance.
    B. Term insurance.
    C. Endowment insurance.
    D. Accident and health insurance.

24. Which of these life insurance policies should you buy if you want the most protection for the least amount of money?

    A. One year term policy.
    B. 20 year endowment policy.
    C. Whole life policy.
    D. 20 payment life policy

25. A 25-year-old man is married and has a two-year-old child. The man and his wife each have a $1,000 life insurance policy which they are paying on. They decide to buy more insurance, but because the man will earn very little money for the next 5 years, they cannot spend more than $60 a year on additional insurance. How should they spend the $60?

    A. Insure the lives of father, mother, and child for $20 each.
    B. Insure the father and mother for $30 each.
    C. Spend all of the money insuring the life of the child.
    D. Spend all of the money insuring the life of the father.

26. When buying health and accident insurance, it is most important to insure against which of the following?

    A. Dental work.
    B. Shots and vaccinations
    C. Semiannual physical examinations
    D. Unexpected illness which would require hospitalization.

27. Which of the following is most important to insure against?

    A. Polio
    B. Loss of a limb (leg or arm) in a railroad accident.
    C. Scarlet fever
    D. Cost of hospital room

28. If you cannot spend much money on automobile insurance, and therefore you are going to buy just one type of insurance, which type should it be?

    A. The kind that protects you against claims for damages from other people.
    B. The kind that protects you against total loss to your automobile because of theft.
    C. The kind that will pay you for any damages your car receives in a crash or an upset.
    D. The kind that protects you against loss to your car because of fire.

29. If you should run your car into another person's car, you would want your insurance company to pay for the damages to this other car. Which of these types of insurance would pay for this?

    A. Comprehensive insurance.
    B. Liability insurance.
    C. Damage insurance.
    D. Collision insurance.

30. Which of the following would be the wisest thing to do if you want to protect yourself against a large expense due to a crash or an upset of your car, but you must cut the cost of your insurance?

    A. Buy less liability insurance.
    B. Buy comprehensive insurance instead of the other types.
    C. Buy less collision insurance.
    D. Buy a $100 deductible collision policy.

31. When you borrow money from a bank, you usually pay back the money by making monthly payments. What will happen if you are always late in making these monthly payments?

    A. Nothing will happen so long as you eventually pay back all the money you have borrowed plus interest.
    B. The bank will give your loan to a small loan company after you have been late two or three times.
    C. The bank will notify the local credit rating bureau that you are slow in making payments.
    D. The bank will sue you for dishonesty and fraud.

32. A certain man has been so careless in paying his bills that for the past few months stores have not let him charge things. He is now moving to another province where he would like to use credit (charge things). Which of the following statements about his credit is true?

A. His bad credit reputation will follow him to the new province.
B. If he is not prompt in his payments in the new province, someone is likely to check on his past credit reputation.
C. His credit reputation will be all right if he keeps secret the names of the stores where he bought things in his old city.
D. The interprovincial commerce commission does not allow credit information to pass from one state to another.

33. Sometimes buying on time (buying on an installment plan) is a good thing to do. Which of the following is the best reason for buying on time?

A. You will be able to show that you pay your bills promptly so that in emergencies you can get credit easier.
B. You will keep from buying too many things.
C. You will be able to shop around at many different stores.
D. You will be able to buy things cheaper.

34. When you buy goods on time and sign a conditional sales contract, what could happen if you do not make a payment when it is due?

A. The seller can sue you for an unlimited amount of money.
B. All the money you still owe becomes due and the seller can take the goods from you if you can't pay.
C. The seller can sue you for the full amount of the goods plus all court costs.
D. The seller can't take the goods away from you, but he can turn the bill over to a collection agency.

35. You want to borrow $1,000 and pay it back over the next year by making 12 equal payments. Which of these plans would require you to pay the least interest?

A. 6 per cent on the entire $1,000.
B. $\frac{1}{2}$ per cent a month on the balance still owed in any month.
C. A flat charge of $55.
D. 4 per cent on the entire $1,000 plus an administrative charge of $30.

36. From which of these four places would the cost for borrowing money usually be least?

A. Small loan company.
B. Personal loan department of a bank
C. Pawnbroker
D. Unlicensed lender

37. You borrow $300 from a bank, and you agree to pay back the $300 by making a payment each month so that by the end of 12 months, or one year, the money will be repaid. The banker tells you that the cost for this will be 6 per cent times $300 which is $18. So you really pay back $318 over the 12 months. What is the true annual interest charge?

    A. About 6 per cent.
    B. About 12 per cent.
    C. About 18 per cent.
    D. About 24 per cent.

38. Which of the following is a disadvantage of borrowing money on a life insurance policy?

    A. The interest cost is usually higher than it would be at a bank.
    B. The insurance premium will be increased because you will be older when the loan is paid back.
    C. You may not have enough insurance protection during this time.
    D. Insurance companies can require you to pay back the money at any time.

39. The small loan law, which has been passed in Canada, provides for which of the following?

    A. A lender cannot charge more than 2% interest per month on small loans.
    B. Banks must accept applications for loans from all who apply.
    C. Individuals are not allowed to borrow money from more than one loan company or bank at a time.
    D. The provincial government helps loan companies collect money from people who do not make payments when they are due.

40. When asked by a friend to go to a store to buy an ice cream soda, a 17-year-old boy said, "No, I budget my money and I cannot spend any more this week on refreshments." This boy is wisest if which of the following is his reason for budgeting?

    A. He impresses people with his business-like actions.
    B. He is learning to discipline himself by being stingy.
    C. He is practicing going without things he wants in case hard times come in the future.
    D. He has some other purpose for his money which seems more important to him.

41. Two young people were recently married. Their income is $225 a month. Which of the following attitudes about keeping records and budgets is best for this couple?

    A. Their income is too small to make record-keeping or budgeting possible.
    B. Their income is too small for budgeting, but keeping a record of expenses is important.
    C. Because of the small income and the small family, budgeting and record-keeping would not be worth the amount of work involved.
    D. Both record-keeping and budgeting would be worth while for this couple.

42. Which of the following is a reason why many families give up trying to keep a budget?

    A. They make their own budget forms.
    B. They make their budget too complicated
    C. They keep the budget too simple.
    D. Their income is too low.

43. Which of the following is the best reason for saving money?

    A. So that in the future you can buy something that you want.
    B. To see how much money you can pile up.
    C. To show your parents that you are thrifty.
    D. So that you will be patriotic.

44. Which of these types of interest will earn the most money over 10 years?

    A. 3 percent simple interest withdrawn every year.
    B. 3 percent simple interest left in the bank to build up.
    C. 3 percent interest compounded semi-annually (every half year).
    D. 3 percent interest compounded annually (every year).

45. When a group of people with common interests (such as people who work for the same company) agree to bring some of their savings together and to make loans to each other at low interest rates, which of the following has been formed?

    A. Consumer finance company.
    B. Credit union.
    C. An illegal corporation.
    D. A white cross plan.

46. If you receive a cheque, made out to you, and if you want to deposit the whole cheque to your account at your bank, what could you do to make sure that the cheque will not be used for any other purpose?

    A. On the back side of the cheque write: "Pay to the order of First State Bank for deposit only." Then sign your name.
    B. On the back side of the cheque sign your name and draw a line under your signature.
    C. Write across the front of the cheque: "Non-transferable." Then, sign your name on the back side.
    D. Cancel the check by writing "Cancelled" across the front of the cheque with the date and your signature.

47. Which of the following is the best way to fill in the amount line when a cheque is written for 50 cents?

    A. 0 and 50/100 _____ dollars.
    B. _____ Only fifty cents _____ dollars.
    C. Fifty _____ 50/100 dollars.
    D. No and 50/100 _____ dollars.

48. The stub of a personal cheque is kept in the chequebook as a record. When should this stub be filled in?

    A. Immediately before the cheque is written.
    B. Immediately after the cheque is written.
    C. At the end of the month.
    D. When all the cheque-blanks have been used up.

49. Which of the following best tells how insurance companies stay in business?

    A. Insurance is a law in this country, so the government subsidizes (gives money to) insurance companies.
    B. Benjamin Franklin and other partiotic leaders wanted insurance companies to be private business and not government-owned, so they donated real estate, which now supports the companies.
    C. The companies make money by insuring large numbers of people. They can tell in advance about how much they will pay in losses, so they set their rates accordingly.
    D. Because insurance is so necessary, foundations give grants of money to the companies, which with payments made by people insured, keeps the companies going.

50. Which of the following is the reason for buying fire insurance on a house?

    A. To reduce the chances of fire.
    B. To keep the house from burning.
    C. To enable you to receive money to offset the financial loss in case of fire.
    D. To help you to pay for the expense of using the fire department's services.

51. What should you do if you lose your Unemployment Insurance Book?

    A. Apply for a different book from the nearest local social security office.
    B. Apply for a duplicate book with the same number from the nearest local social security office.
    C. Go through probate court to get a new number.
    D. There is nothing you can do, but as long as you do not change jobs, you will be covered.

52. Which of the following is the Federal Government's own program for protecting the aged and certain dependents?

    A. Blue Cross Plan
    B. National Mutual Pension Plan.
    C. Old Age Security Tax
    D. Dominion Government Annuity.

53. Which of the following is true when an insurance agent collects payments for life insurance every week?

    A. The insurance policy was issued by a stock company.
    B. The insurance agent doesn't trust the person being insured, so he collects more often.
    C. The person being insured is taking advantage of a policy which costs less per dollar of protection than other policies.
    D. The insurance policy is more expensive per dollar of protection than are larger policies.

54. Which of the following kinds of insurance policies would cost the most per $1,000?

    A. One-year term policy.
    B. 20-year endowment policy.
    C. Whole life policy.
    D. 20-payment life policy.

55. A 25-year-old man with a wife and child wants an insurance policy on his own life which will give him the most insurance possible for the amount he will pay. He also wants the policy to build up a cash value over the years. Which of these types of policies should he buy?

    A. An endowment policy.
    B. A limited payment life policy.
    C. A whole life policy.
    D. A term policy.

56. A 25-year-old man is married and has 2 children under five years of age. Because he is just starting out on his job, his income is very small. He has no life insurance on himself. He can spend very little money on life insurance. Which of the following types of life insurance would be best for him?

    A. A policy which would be paid up by the time he is 45 years old.
    B. A policy which would pay him a lump sum in cash at the end of 20 years.
    C. A policy which would protect him for 10 years, and which would have no cash value at the end of 10 years.
    D. A policy which would enable his children to get a lump sum in cash when they are 18 years old.

57. A young married couple with 2 children under 10 years of age does not have health and accident insurance. Which of the following usually would be best for a family such as this one?

    A. Get a family policy by joining the group plan where the father works.
    B. Buy an individual family policy.
    C. Buy an individual policy for each member of the family.
    D. Each month, put in the bank a certain amount of money which can be used when needed for medical purposes.

58. Which of the following hospitalization plans is sponsored by hospitals and run on a nonprofit basis?

    A. Hospital security.
    B. National Mutual Insurance Plan.
    C. Blue Cross
    D. White Cross.

59. Which of the following would you drop if your car is getting old and you want to save money by dropping some insurance?

    A. The kind that protects you against claims for damages from other people.
    B. The kind that protects you against total loss to your car because of theft.
    C. The kind thatwill pay you for any damages your car receives in a crash or an upset.
    D. The kind that protects you against loss to your automobile because of fire.

60. Which of the following should you buy if you want to protect yourself against a court claim because of the possibility of your dog biting someone who visits you?

    A. Personal liability insurance.
    B. Accident insurance.
    C. Health insurance.
    D. Canine insurance.

APPENDIX B

Place your answers to the test questions in the proper squares.

SAMPLE QUESTION

	A	B	C	D
			X	

	A	B	C	D		A	B	C	D		A	B	C	D		A	B	C	D
1					16					31					46				
2					17					32					47				
3					18					33					48				
4					19					34					49				
5					20					35					50				
6					21					36					51				
7					22					37					52				
8					23					38					53				
9					24					39					54				
10					25					40					55				
11					26					41					56				
12					27					42					57				
13					28					43					58				
14					29					44					59				
15					30					45					60				

Name _____ Class ____ Age _____ Sex Male____ Female ____

Circle the subjects from the following list that you are taking this year:

Business Fundamentals 10 Record Keeping 10 Mathematics 10 Mathematics 11

Father's Occupation _____
Describe what he does and where he works, for example, T V Repairman at Eaton's

Mother's Occupation (If employed outside of home) _____
Describe what she does and where she works

Circle the level of education completed by your father:

less than Grade VIII Grade VIII Grade IX Grade X Grade XI Grade XII Do not know

Business College Technical School University State University Degree or Degrees

Circle the level of education completed by your mother:

less than Grade VIII Grade VIII Grade IX Grade X Grade XI Grade XII Do not know

Business College Technical School University State University Degree or Degrees

THANK YOU VERY MUCH FOR YOUR COOPERATION. YOU MAY KEEP THE MARKING PENCIL.

APPENDIX C

DIRECTIONS TO PRESIDING TEACHER

Money Management Test

VISCOUNT BENNETT HIGH SCHOOL, June 3, 1964

1. Hand out the yellow answer sheets, and pencils.

Allow 5 minutes for 1, 2 and 3.

2. Students will complete the information section at the bottom of the sheet. The presiding teacher will be able to give any guidance required.

3. Hand out the test booklets. The students will read carefully the top page.

---

4. Give the students exactly ~~40~~ 40 minutes to do the test.

5. This test is not machine scored. The pencils provided, or any other if necessary, will be satisfactory.

6. At the end of the 40-minute test period collect the yellow answer sheets. They are not to be left in or with the booklets.

7. Collect the test booklets.

Thank you very much,

Melvin R. Tabas

APPENDIX D

INDEX OF RAW DATA

1. A - Borrowing Money and Using Credit
2. B - Personal Finance and Budgets
3. C - Insurance
4. Total Money-Management Test Score
5. Socio-Economic Status Score
6. I. Q. Score
7. Have not Business Fundamentals
8. Have Business Fundamentals
9. I. Q. (high)
10. I. Q. (medium)
11. I. Q. (low)
12. S. E. S. (high)
13. S. E. S. (medium)
14. S. E. S. (low)
15. Female
16. Male
17. Identification Number

RAW DATA FOR KEY PUNCH CARDS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
9	11	16	26	33	109	0	1	0	1	0	0	0	1	1	0	1
7	11	12	31	28	106	0	1	0	0	1	0	0	1	1	0	2
11	15	15	21	28	112	0	1	0	1	0	0	0	1	1	0	3
10	14	12	36	75	103	0	1	0	0	1	1	0	0	1	0	4
6	12	13	31	47	100	0	1	0	0	1	0	1	0	1	0	5
10	12	12	34	56	110	0	1	0	1	0	0	1	0	1	0	6
5	11	13	29	33	96	0	1	0	0	1	0	0	1	1	0	7
7	13	8	28	65	114	0	1	0	1	0	0	1	0	1	0	8
6	13	13	32	29	96	0	1	0	0	1	0	0	1	1	0	9
9	13	13	35	56	100	0	1	0	0	1	0	1	0	1	0	10
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8	16	15	39	56	115	0	1	0	1	0	0	1	0	1	0	14
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10	11	7	28	46	86	0	1	0	0	1	0	1	0	1	0	19
10	9	15	34	51	123	0	1	1	0	0	0	1	0	1	0	20
5	12	6	23	65	107	0	1	0	0	1	0	1	0	1	0	21
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8	13	14	35	65	106	0	1	0	0	1	0	1	0	1	0	26
11	14	17	42	65	132	0	1	1	0	0	0	1	0	1	0	27
10	11	12	33	65	111	0	1	0	1	0	0	1	0	1	0	28
8	9	7	24	65	107	0	1	0	0	1	0	1	0	1	0	29
8	9	7	24	65	107	0	1	0	0	1	0	1	0	1	0	30
6	12	10	28	61	118	0	1	0	1	0	0	1	0	1	0	31
6	15	16	37	84	130	0	1	1	0	0	1	0	0	1	0	32
6	14	14	34	47	109	0	1	0	1	0	0	1	0	0	1	33
11	13	14	38	47	125	0	1	1	0	0	0	1	0	0	1	34
10	16	21	47	56	121	0	1	0	1	0	0	1	0	0	1	35
7	13	13	33	28	93	0	1	0	0	1	0	0	1	0	1	36
12	15	15	42	55	120	0	1	0	1	0	0	1	0	0	1	37
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12	11	15	38	70	110	0	1	0	1	0	1	0	0	0	1	42
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
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9	14	6	29	65	106	0	1	0	0	1	0	1	0	0	1	51
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8	13	11	32	51	99	0	1	0	0	1	0	1	0	0	1	53
11	12	18	41	56	129	0	1	1	0	0	0	1	0	0	1	54
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10	15	15	40	84	123	0	1	0	1	0	1	0	0	0	1	56
7	13	13	33	65	125	0	1	1	0	0	0	1	0	0	1	57
12	12	15	39	47	114	0	1	0	1	0	0	1	0	0	1	58
6	8	16	30	65	110	0	1	0	1	0	0	1	0	0	1	59
6	11	14	31	33	114	0	1	0	1	0	0	0	1	0	1	60
8	10	16	34	60	123	0	1	0	1	0	0	1	0	0	1	61
8	13	8	29	51	108	0	1	0	1	0	0	1	0	0	1	62
8	12	9	29	42	114	0	1	0	1	0	0	0	1	0	1	63
11	14	19	44	51	122	0	1	0	1	0	0	1	0	0	1	64
10	14	12	36	56	113	0	1	0	1	0	0	1	0	0	1	65
7	13	11	31	65	111	0	1	0	1	0	0	1	0	0	1	66
7	12	16	35	51	120	0	1	0	1	0	0	1	0	0	1	67
9	13	16	38	65	113	0	1	0	1	0	0	1	0	0	1	68
9	13	15	37	42	120	0	1	0	1	0	0	0	1	0	1	69
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11	14	11	36	84	113	0	1	0	1	0	1	0	0	0	1	71
8	8	16	32	65	99	0	1	0	0	1	0	1	0	0	1	72
11	11	19	41	47	116	0	1	0	1	0	0	1	0	0	1	73
8	10	12	30	37	117	0	1	0	1	0	0	0	1	0	1	74
5	11	9	25	75	101	0	1	0	0	1	1	0	0	0	1	75
8	15	19	42	42	129	0	1	1	0	0	0	0	1	0	1	76
4	12	8	24	51	112	0	1	0	1	0	0	1	0	0	1	77
9	11	14	34	75	135	1	0	1	0	0	1	0	0	1	0	78
8	12	14	34	65	117	1	0	0	1	0	0	1	0	1	0	79
7	11	12	30	56	118	1	0	0	1	0	0	1	0	1	0	80
7	11	11	29	75	127	1	0	1	0	0	1	0	0	1	0	81
7	98	9	24	84	81	1	0	0	0	1	1	0	0	1	0	82
7	10	7	24	60	117	1	0	0	1	0	0	1	0	1	0	83
11	13	14	38	46	127	1	0	1	0	0	0	1	0	1	0	84
11	15	13	39	33	125	1	0	1	0	0	0	0	1	1	0	85
8	10	10	28	38	103	1	0	0	0	1	0	0	1	1	0	86
6	11	11	28	65	114	1	0	0	1	0	0	1	0	1	0	87
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11	14	10	35	51	113	1	0	0	1	0	0	1	0	1	0	89
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6	11	14	31	84	135	1	0	1	0	0	1	0	0	1	0	92
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10	9	11	30	42	121	1	0	0	1	0	0	0	1	1	0	95
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9	10	7	26	51	118	1	0	0	1	0	0	1	0	1	0	107
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7	9	16	32	51	113	1	0	0	1	0	0	1	0	0	1	127
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7	9	7	23	56	109	1	0	0	1	0	0	1	0	0	1	132
9	12	14	35	75	111	1	0	0	1	0	1	0	0	0	1	133
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9	14	14	37	65	108	1	0	0	1	0	0	1	0	0	1	141
5	6	10	21	28	114	1	0	0	1	0	0	0	1	0	1	142
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7	14	14	35	42	123	1	0	0	1	0	0	0	1	0	1	145
10	12	18	40	84	120	1	0	0	1	0	1	0	0	0	1	146
7	13	14	34	57	128	1	0	1	0	0	0	1	0	0	1	147
6	14	12	32	47	118	1	0	0	1	0	0	1	0	0	1	148
11	11	11	33	33	102	1	0	0	0	1	0	0	1	0	1	149
7	10	12	29	46	107	1	0	0	0	1	0	1	0	0	1	150
8	12	9	29	65	105	1	0	0	0	1	0	1	0	0	1	151
9	15	15	39	38	119	1	0	0	1	0	0	0	1	0	1	152
9	11	7	27	42	116	1	0	0	1	0	0	0	1	0	1	153
8	12	9	29	47	111	1	0	0	1	0	0	1	0	0	1	154
9	14	14	37	60	126	1	0	1	0	0	0	1	0	1	0	155
8	15	14	37	65	131	1	0	1	0	0	0	1	0	1	0	156
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6	11	9	26	47	110	1	0	0	1	0	0	1	0	1	0	159
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6	13	8	27	56	124	1	0	1	0	0	0	1	0	1	0	161
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7	12	12	31	42	111	1	0	0	1	0	0	0	1	1	0	181
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9	11	14	34	51	116	1	0	0	1	0	0	1	0	1	0	186
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5	11	11	27	75	131	1	0	1	0	0	1	0	0	1	0	188
9	12	12	33	61	139	1	0	1	0	0	0	1	0	1	0	189
8	12	10	30	56	105	1	0	0	0	1	0	1	0	1	0	190
5	11	9	25	56	117	1	0	0	1	0	0	1	0	1	0	191
7	12	14	33	42	112	1	0	0	1	0	0	0	1	1	0	192

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6	9	15	30	56	123	1	0	0	1	0	0	1	0	1	0	195
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9	15	14	38	65	125	1	0	1	0	0	0	1	0	1	0	197
7	11	11	29	60	121	1	0	0	1	0	0	1	0	1	0	198
7	17	10	34	28	126	1	0	1	0	0	0	0	1	1	0	199
8	9	12	29	51	130	1	0	1	0	0	0	1	0	1	0	200
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10	16	14	40	33	138	1	0	1	0	0	0	0	1	1	0	203
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4	12	6	22	37	99	1	0	0	0	1	0	0	1	1	0	210
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7	10	8	24	84	103	1	0	0	0	1	1	0	0	1	0	216
7	14	10	31	33	105	1	0	0	0	1	0	0	1	1	0	217
9	11	19	19	60	123	1	0	0	1	0	0	1	0	1	0	218
13	13	14	40	84	136	1	0	1	0	0	1	0	0	1	0	219
7	10	11	29	46	109	1	0	0	1	0	0	1	0	1	0	220
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8	13	10	31	42	103	1	0	0	0	1	0	0	1	1	0	242
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6	10	10	26	51	124	1	0	1	0	0	0	1	0	1	0	245
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9	10	17	36	65	120	1	0	0	1	0	0	1	0	1	0	247
7	8	11	26	28	122	1	0	0	1	0	0	0	1	1	0	248
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7	9	10	26	56	121	1	0	0	1	0	0	1	0	1	0	250
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7	10	12	29	28	115	1	0	0	1	0	0	0	1	1	0	257
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7	16	14	37	56	124	1	0	1	0	0	0	1	0	1	0	267
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10	7	7	24	75	118	1	0	0	1	0	1	0	0	1	0	271
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9	9	13	31	75	133	1	0	1	0	0	1	0	0	1	0	290
6	11	13	30	56	121	1	0	0	1	0	0	1	0	1	0	291
9	9	14	32	56	108	1	0	0	1	0	0	1	0	1	0	292
9	11	14	34	56	123	1	0	0	1	0	0	1	0	1	0	293

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
7	13	12	32	84	126	1	0	1	0	0	1	0	0	1	0	294
10	13	13	36	56	101	1	0	0	0	1	0	1	0	1	0	295
11	13	14	38	56	123	1	0	0	1	0	0	1	0	1	0	296
8	11	10	29	56	122	1	0	0	1	0	0	1	0	1	0	297
10	8	10	28	51	114	1	0	0	1	0	0	1	0	0	1	298
7	8	18	33	75	119	1	0	0	1	0	1	0	0	0	1	299
5	9	13	27	51	101	1	0	0	0	1	0	1	0	0	1	300
12	13	17	42	70	133	1	0	1	0	0	1	0	0	0	1	301
7	15	17	39	84	133	1	0	1	0	0	1	0	0	0	1	302
7	12	12	31	42	102	1	0	0	0	1	0	0	1	0	1	303
8	12	14	34	47	114	1	0	0	1	0	0	1	0	0	1	304
5	9	13	27	38	120	1	0	0	1	0	0	0	1	0	1	305
8	11	13	32	61	114	1	0	0	1	0	0	1	0	0	1	306
6	11	13	30	56	93	1	0	0	0	1	0	1	0	0	1	307
9	15	16	40	70	120	1	0	0	1	0	1	0	0	0	1	308
8	13	16	36	47	121	1	0	0	1	0	0	1	0	0	1	309
8	12	10	30	51	118	1	0	0	1	0	0	1	0	0	1	310
6	13	12	31	56	100	1	0	0	0	1	0	1	0	0	1	311
9	13	13	35	60	119	1	0	0	1	0	0	1	0	0	1	312
10	11	9	30	37	100	1	0	0	1	0	0	0	1	0	1	313
7	11	10	28	84	102	1	0	0	0	1	1	0	0	0	1	314
8	16	15	39	56	127	1	0	1	0	0	0	1	0	0	1	315
11	13	16	40	51	119	1	0	0	1	0	0	1	0	0	1	316
8	11	10	29	42	113	1	0	0	1	0	0	0	1	0	1	317
9	12	17	38	33	93	1	0	0	0	1	0	0	1	0	1	318
10	14	16	40	70	131	1	0	1	0	0	1	0	0	0	1	319
7	12	11	30	42	108	1	0	0	1	0	0	0	1	0	1	320
7	10	10	27	47	94	1	0	0	0	1	0	1	0	0	1	321
9	12	14	35	84	114	1	0	0	1	0	1	0	0	0	1	322
10	6	8	24	65	106	1	0	0	0	1	0	1	0	0	1	323
9	11	17	37	61	118	1	0	0	1	0	0	1	0	0	1	324
12	10	11	13	28	115	1	0	0	1	0	0	0	1	0	1	325
5	12	15	32	70	117	1	0	0	1	0	1	0	0	0	1	326
4	11	10	25	56	115	1	0	0	1	0	0	1	0	0	1	327
9	10	13	32	75	127	1	0	1	0	0	1	0	0	0	1	328
8	14	13	35	65	130	1	0	1	0	0	0	1	0	0	1	329
10	15	15	40	28	100	1	0	0	0	1	0	0	1	0	1	330
11	9	15	35	75	125	1	0	1	0	0	1	0	0	0	1	331
9	10	13	32	38	110	1	0	0	1	0	0	0	1	0	1	332
5	8	13	26	47	113	1	0	0	1	0	0	1	0	0	1	333
9	13	13	35	65	141	1	0	1	0	0	0	1	0	0	1	334
9	9	14	32	42	105	1	0	0	0	1	0	0	1	0	1	335
8	9	11	28	75	117	1	0	0	1	0	1	0	0	0	1	336
8	13	12	33	75	117	1	0	0	1	0	1	0	0	0	1	337
12	16	15	43	33	124	1	0	1	0	0	0	0	1	0	1	338
8	11	15	34	70	121	1	0	0	1	0	1	0	0	0	1	339
7	11	16	34	42	102	1	0	0	0	1	0	0	1	0	1	340
9	15	13	37	65	114	1	0	0	1	0	0	1	0	0	1	341
8	9	13	30	38	103	1	0	0	0	1	0	0	1	0	1	342
5	9	10	24	65	126	1	0	1	0	0	0	1	0	0	1	343

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
8	12	9	29	47	114	1	0	0	1	0	0	1	0	0	1	344
7	14	12	33	51	108	1	0	0	1	0	0	1	0	0	1	345
6	14	16	36	93	115	1	0	0	1	0	1	0	0	0	1	346
5	12	9	26	52	111	1	0	0	1	0	0	1	0	0	1	347
13	9	12	34	75	120	1	0	0	1	0	1	0	0	0	1	348
8	6	7	21	47	103	1	0	0	0	1	0	1	0	0	1	349
6	14	13	33	65	118	1	0	0	1	0	0	1	0	0	1	350
8	14	16	38	56	130	1	0	1	0	0	0	1	0	0	1	351
6	7	7	20	65	109	1	0	0	1	0	0	1	0	0	1	352
9	8	9	26	56	119	1	0	0	1	0	0	1	0	0	1	353
7	14	14	35	47	119	1	0	0	1	0	0	1	0	0	1	354
8	12	11	31	75	105	1	0	0	0	1	1	0	0	0	1	355
10	13	12	35	84	132	1	0	1	0	0	1	0	0	0	1	356
11	13	13	37	28	120	1	0	0	1	0	0	0	1	0	1	357
9	12	12	33	56	133	1	0	1	0	0	0	1	0	0	1	358
9	11	5	25	37	106	1	0	0	0	1	0	0	1	0	1	359
4	9	12	25	61	107	1	0	0	0	1	0	1	0	0	1	360
9	11	11	31	52	106	1	0	0	0	1	0	1	0	0	1	361
4	12	12	28	47	111	1	0	0	1	0	0	1	0	0	1	362
7	11	12	30	28	108	1	0	0	1	0	0	0	1	0	1	363
7	12	14	33	47	118	1	0	0	1	0	0	1	0	0	1	364
7	10	6	23	51	118	1	0	0	1	0	0	1	0	0	1	365
7	12	14	33	51	115	1	0	0	1	0	0	1	0	0	1	366
5	11	16	32	46	106	1	0	0	0	1	0	1	0	0	1	367
7	12	10	29	56	115	1	0	0	1	0	0	1	0	0	1	368
9	10	10	29	37	112	1	0	0	1	0	0	0	1	0	1	369
10	13	9	32	61	119	1	0	0	1	0	0	1	0	0	1	370
5	9	13	26	51	101	1	0	0	0	1	0	1	0	0	1	371
8	12	13	33	56	115	1	0	0	1	0	0	1	0	0	1	372
7	12	16	35	75	128	1	0	1	0	0	1	0	0	0	1	373
8	12	16	36	51	130	1	0	1	0	0	0	1	0	0	1	374
6	10	12	28	56	112	1	0	0	1	0	0	1	0	0	1	375
7	14	13	34	65	116	1	0	0	1	0	0	1	0	0	1	376
7	8	9	24	70	109	1	0	0	1	0	0	0	1	0	1	377
9	12	10	31	42	117	1	0	0	1	0	0	0	1	0	1	378
8	13	13	34	75	112	1	0	0	1	0	1	0	0	0	1	379
8	10	9	27	65	104	1	0	0	0	1	0	1	0	0	1	380
10	7	8	25	65	110	1	0	0	1	0	0	1	0	0	1	381
4	13	9	26	46	112	1	0	0	1	0	0	1	0	0	1	382
10	15	16	41	75	120	1	0	0	1	0	1	0	0	0	1	383
10	10	13	33	28	127	1	0	1	0	0	0	0	1	0	1	384
12	15	17	44	65	130	1	0	1	0	0	0	1	0	0	1	385
6	14	14	34	56	124	1	0	1	0	0	0	1	0	0	1	386
8	13	14	35	75	105	1	0	0	0	1	1	0	0	0	1	387
8	12	16	36	56	108	1	0	0	1	0	0	1	0	0	1	388
10	11	17	38	56	117	1	0	0	1	0	0	1	0	0	1	389
10	14	13	37	51	120	1	0	0	1	0	0	1	0	0	1	390
6	15	13	34	47	114	1	0	0	1	0	0	1	0	0	1	391
7	13	10	30	98	119	1	0	0	1	0	1	0	0	0	1	392
5	10	10	25	56	113	1	0	0	1	0	0	1	0	0	1	393

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
10	14	8	32	52	124	1	0	1	0	0	0	1	0	0	1	394
8	14	8	30	51	100	1	0	0	0	1	0	1	0	0	1	395
8	10	14	32	23	115	1	0	0	1	0	0	0	1	0	1	396
7	8	11	26	75	107	1	0	0	0	1	1	0	0	0	1	397
7	11	7	25	65	116	1	0	0	1	0	0	1	0	0	1	398
9	15	12	36	65	120	1	0	0	1	0	0	1	0	0	1	399
9	12	17	38	28	131	1	0	1	0	0	0	0	1	0	1	400
8	12	6	26	61	115	1	0	0	1	0	0	1	0	0	1	401
8	12	16	36	42	123	1	0	0	1	0	0	0	1	0	1	402
8	13	18	39	56	110	1	0	0	1	0	0	1	0	0	1	403